The Journal of the American Medical Association

Published Under the Auspices of the Board of Trustees

VOL. 116, No. 15 — COPYRIGHT, 1941, BY AMERICAN MEDICAL ASSOCIATION CHICAGO, ILLINOIS — APRIL 12, 1941

TUBERCULOSIS OF THE TRACHEA AND BRONCHUS

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NEW YORK

Tuberculosis of the trachea and bronchus is the most discussed phase of diseases of the chest today. Numerous studies have appeared in recent years which have served to stimulate interest and encourage further effort. This condition had been recorded by pathologists long before the subject claimed the attention of the clinician. Carswell [1] and Louis [2] reported their autopsy results as long ago as 1838 and 1844 respectively. Prior to 1932 an occasional unanticipated bronchoscopic observation was reported. Since then bronchoscopy has been frequently performed on tuberculous patients. The writings of Krause,[3] Schonwald,[4] Andrews,[5] Vinson,[6] Eloesser,[7] Van Allen,[8] McConkey and Greenberg,[9] Samson,[10] Barnwell,[11] Bugher, Littig and Culp,[12] Ornstein and Epstein,[13] Werner,[14] Kernan,[15] Ballon,[16] Phelps [17] and others have contributed a share toward a better understanding of this subject.

This paper is based on clinical observations and deductions made in a series of five hundred and seventy-two consecutive bronchoscopies of tuberculous patients at the Sea View Hospital. A specific lesion was found in the trachea or bronchus of 152 of the patients. The incidence of tuberculosis of the bronchus based on these studies is 4 per cent. Eight additional cases were encountered in private practice.

1. Carswell, Robert: Pathological Anatomy, London, Longman [and others], 1938.
2. Louis, P. C. A.: Researches on Phthisis, translated by W. H. Walshe, London, Sydenham Society, 1844.
3. Krause, A. K.: Experimental Studies in Tuberculous Infection, in Harvey Lectures, Baltimore, Williams and Wilkins Company, 1922.
4. Schonwald, P.: Tuberculous Granuloma of the Bronchus, Am. Rev. Tuberc. **16:** 425 (Oct.) 1928.
5. Andrews, C. H.: Bronchial Stenosis in Pulmonary Tuberculosis, Canad. M. A. J. **33:**36 (July) 1935.
6. Vinson, P. P.: The Diagnosis and Treatment of Obstructing Tuberculous Lesions of the Tracheobronchial Tree, Virginia M. Monthly **66:** 221 (April) 1939.
7. Eloesser, Leo: Bronchial Stenosis in Pulmonary Tuberculosis, Am. Rev. Tuberc. **30:** 123 (Aug.) 1934.
8. Van Allen, C. M.: Obstructive Pulmonary Emphysema and Collateral Respiration, Surg., Gynec. & Obst. **55:** 303 (Sept.) 1932.
9. McConkey, Mack, and Greenberg, S.: Persistent Rhonchi in the Diagnosis of Bronchial Stenosis Complicating Pulmonary Tuberculosis, Tr. Am. Clin. & Climat. Soc. **50:** 218, 1934.
10. Samson, P. C.: Tuberculous Tracheobronchitis: The Role of Bronchoscopy, Am. Rev. Tuberc. **34:** 671 (Nov.) 1936.
11. Barnwell, John B.; Littig, John, and Culp, John E.: Ulcerative Tuberculous Tracheobronchitis, Am. Rev. Tuberc. **38:** 8 (July) 1937.
12. Bugher, J. C.; Littig, John, and Culp, John E.: Tuberculous Tracheobronchitis: Its Pathogenesis, Am. J. M. Sc. **193:** 515 (April) 1937.
13. Ornstein, G. G., and Epstein, I. G.: Tuberculosis of the Major Bronchi with Little or No Manifest Pulmonary Tuberculosis, Quart. Bull., Sea View Hosp. **3:** 109 (Jan.) 1938.
14. Werner, W. L.: Bronchial Obstruction as a Complication of Pulmonary Tuberculosis Under Artificial Pneumothorax, Am. Rev. Tuberc. **31:** 44 (Jan.) 1935.
15. Kernan, J. D.: Bronchoscopy in Pulmonary Tuberculosis, Laryngoscope **47:** 777 (Nov.) 1937.
16. Ballon, D. H.: Bronchoscopy in the Diagnosis of Asthma Complicating Pulmonary Tuberculosis, J. Thoracic Surg. **5:**103 (Oct.) 1935.
17. Phelps, K. A.: Bronchial Obstruction in Chronic Tuberculosis, Ann. Otol., Rhin. & Laryng. **45:** 1133 (Dec.) 1936.

The same bronchial lesions are not seen by the pathologist and bronchoscopist. The bronchoscopist observes the entire life picture of a tuberculous lesion, whereas the pathologist sees only the last change which occurred. All bronchial tuberculosis, with the exception of that due to the penetration into the lumen of a disintegrating gland, originates from a small or large cavity in the lung, called by some a caseous pneumonic process. The pathologist of the Sea View Hospital, Dr. Oscar Auerbach, observed an involvement of the bronchioles immediately adjacent to tuberculous cavities in 90 per cent of cases. The infection progresses from the parenchyma by way of a bronchiole along the smaller bronchial branches until it reaches the main bronchus.

If the bronchoscopist is fortunate enough to see the lesion very early, he encounters a slightly stenosed branch bronchus which appears to have a concentric thickening of the mucous membrane. A similar picture is sometimes seen in the main bronchus. This is the first stage, consisting of a submucous infiltration which causes a slight elevation of the mucosa. Submucous infiltration is not frequently encountered by the bronchoscopist; it accounted for nine of the one hundred and sixty lesions observed. The submucous infiltration consists of an invasion of the submucous tissues by the elements of tuberculous inflammation (fig. 1). This process may remain in the submucosa, where it either resolves or progresses to involve other parts of the bronchial wall. In some cases it extends only to the surface. When this granulation tissue breaks through the intact mucosa an ulceration results. It does not remain so for long because the tuberculous elements extend above the surface to form a granuloma. The process just described is the second stage: the ulcerogranuloma. This type of lesion was seen one hundred and one times in my series.

The ulcerogranuloma is the most frequently observed tuberculous lesion of the bronchus; it represents the most active phase of the disease, filling the adjacent branch bronchus and causing an atelectasis of the disease-bearing area. It extends along the bronchial wall from the branch bronchus. This process may resolve at any time, leaving behind superficial fibrous tissular changes which may not be visible. In most instances, however, the granuloma eventually fills the main bronchus, so that atelectasis of the entire lung results. As long as the granuloma is nonobstructive, the sputum shows tubercle bacilli. As soon as it occludes the bronchus, however, the sputum ceases to show tubercle bacilli.

When a suppurative focus exists about the primary lesion in the lung, the exudate passing through the bronchus prevents complete occlusion by the granuloma. It is unusual for a suppurative focus to be shut off by a granulomatous or fibrotic lesion.

Frequently the superficial layers of the ulcerogranuloma undergo caseous degeneration. This is recog-

nized bronchoscopically as a white covering of creamy consistency when moisture is present or of flaky consistency when dry. The caseous material is heavily laden with tubercle bacilli. Accumulation of the flakes occasionally completely obstructs the bronchus. This form of the disease has been called caseous endobronchitis by Loeschke [18] and caseous necrotic bronchitis by Ornstein and Epstein.[13] A better term would be ulcerogranuloma of the bronchus with caseation.

Ulcerogranulomas have a definite distribution. They originate from a lesion in the upper or lower lobe of a lung, from which source they may extend all the way up the trachea to the subglottic region or may stop at any point. Extension upward may proceed slowly, so that the lesion may require many months to reach the upper portion of the trachea; it can extend rapidly, reaching this region within a single month.

The bronchoscopist frequently sees thickened mucosa which is indicative of submucous infiltration in advance of the granuloma. This is evidence of the continuity of the tuberculous process beneath the mucosa.

The ulcerogranuloma is pale pink, corrugated and avascular. When healing or resolution takes place the

Fig. 1.—Section of mucosa of bronchus (low power magnification). There are Langhans' giant cells and numerous small lymphocytes in the center indicative of submucous infiltration.

irregular surface becomes flattened and assumes a velvety appearance. This appearance indicates the presence of the final stage—fibrosis. Fibrotic lesions were encountered thirty-seven times. A mixed lesion may occur in the same tracheal or bronchial wall. Occasionally one sees an advancing ulcerogranulomatous lesion at the upper limit of the wall and a fibrotic one below. In a few cases an apparently isolated ulcer was seen just above and beyond the granulomatous process; at a subsequent bronchoscopy the granuloma had progressed to include the ulcer.

Fibrosis is usually associated with some degree of stenosis. When the granuloma has invaded the entire endobronchial surface, so that the lumen is completely filled, the fibrous tissue replacement produces a passage

18. Loeschke, H.: Ueber Entwicklung Vernarbung und Reaktivierung der Lungentuberkulose Erwachsener, Beitr. z. Klin. d. Tuberk. **68**: 251, 1928.

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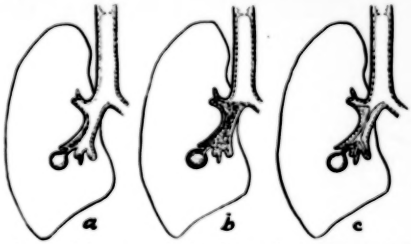

Fig. 2.—Various stages of tuberculosis of the bronchus: *a*, ulcerogranuloma of lateral bronchial wall originating from cavity in lower lobe of right lung; *b*, later stage, granuloma completely occluding bronchus; *c*, granuloma replaced by fibrous tissue.

is so involved fibrotic closure is the rule. The healing, therefore, of a lesion which has extended from a lower lobe branch to occlude the main bronchus results in the reestablishment of aeration of all the atelectatic lung except the original disease-bearing part.

The fibrotic changes encountered by the pathologist are not different from those seen by the endoscopist. In some instances the fibrosis involves the entire thickness of the bronchial wall. The ulcerogranuloma is never seen as such by the pathologist because this type of lesion undergoes caseous degeneration just before death. The entire bronchial wall or only part of it may be so involved. The pathologist frequently encounters multiple small superficial ulcerations of the tracheal mucous membrane at autopsy. Such ulcerations are not seen by the bronchoscopist and must be regarded as the result of antemortem changes.

The upper end of a lesion represents the limit of its extension from the primary focus in the lung. When the main bronchus is occluded the bronchoscopist must draw his conclusions as to the lesion's origin from previous observations or from the roentgen findings and physical signs. If the ulcerogranuloma is partly obstructive he may be able to trace it all the way to the bronchus of the upper lobe or branch of the lower lobe from which it originated. The granuloma is first seen to occlude the branch leading to the pulmonary lesion. From there it extends upward along the cor-

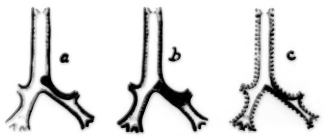

Fig. 3 (case 1).—Condition of left main bronchus: *a*, October 1938; *b*, February 1939; *c*, July 1939.

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it may involve the entire endobronchial surface so as completely to obstruct the passage. It may stop at any point in its path upward, causing a degree of obstruction which is in direct proportion to the volume and extent of the granuloma. Ulcerogranulomatous and fibrotic lesions are traceable to primary caseous pneumonic processes in the upper lobes more frequently than in the lower; the ratio is approximately 3 to 2 (fig. 2).

An exception to the ulcerogranuloma which extends along a bronchial surface is the granulomatous process resulting from protrusion of a disintegrating mediastinal gland into the trachea or bronchus. This occurred three times in my series of cases. From these granulomas a fistula led through the carina into the region of the interbronchial glands.

The lesions which have been discussed thus far affect principally the endobronchial surface or the bronchial wall. Many endobronchial impressions among tuberculous patients, however, are dependent on changes in the mediastinal glands. These are usually enlarged because of tuberculous involvement, their enlargement causing pressure on a section of the wall of the bronchus or trachea.

I [19] have previously reported that the evidence of glandular pressure is in three principal locations around the tracheal bifurcation—at each tracheobronchial angle and at the interbronchial carina. Occasionally, compression of the medial wall of the

Fig. 4 (case 2).—Conditions in right bronchus at the time of four bronchoscopies.

main bronchus is seen a short distance from the carina. Indentations by glands occur more frequently among children than among adults. Out of twenty-nine bronchoscopies performed on tuberculous children thirteen disclosed positive lesions, seven of which were due to glandular pressure. Such pressure on the trachea or bronchus accounts for about 1 per cent of all tuberculous bronchial lesions in adults.

The most frequent evidence of mediastinal glandular disease is an inward bulge of one of the bronchial walls which narrows the lumen. A much less frequent, in fact rare, result of pressure on the bronchial wall is its collapse because of absorption of the cartilaginous rings. The prolonged pressure on the bronchial wall accounts for this unusual change. The result is a falling in of the wall, so that the lumen presents a horizontal slit which does not resist the passage of the bronchoscope. Two cases of collapse of the bronchial wall through absorption of cartilaginous rings occurred in this study.

The signs and symptoms of tuberculosis of the trachea and bronchi are caused by varying degrees of obstruction. It is noteworthy that a specific lesion of the trachea and bronchus may exist with little or no manifest disease in the lung. Partial stenosis of the trachea or main bronchus gives rise to a type of breathing which is described by the patient as noisy, rattling, gurgling or wheezing. This symptom continues even after the patient has expectorated large quantities of sputum. The sound caused by the breathing is frequently heard by others. This type of breathing has been mistakenly considered asthmatic. As a result, patients are given numerous tests for allergy and special injections and inhalations. In a previous article it was emphasized that such breathing occurring in tuberculous patients could result from causes other than tuberculous bronchial lesions; it may be due to pressure on the trachea or bronchus or both by enlarged carcinomatous glands, by carcinoma or by adherent bronchial secretions.

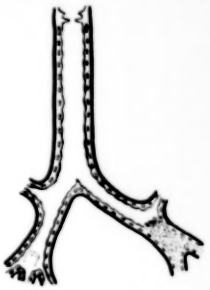
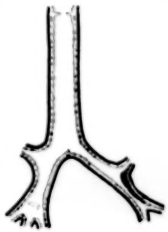


Fig. 5 (case 3).—Occlusion of bronchus of lower lobe of left lung by granuloma and caseous material.

Atelectasis may be confined to a relatively small segment of lung or to the entire lung of the involved side and may be the first sign of pulmonary tuberculosis. The physician in attendance suspects the presence of a foreign body or neoplasm in the bronchus when he encounters localized atelectasis; he is surprised to learn from the bronchoscopist that a tuberculous ulcerogranuloma or fibrostenosis is the cause. Complete stenosis may be due to a nonobstructive ulcerogranuloma which has become obstructive because of flaky caseous material superimposed on it.

That ulcerogranulomas may act in the same manner as foreign bodies has already been mentioned. They may cause incomplete obstruction or complete obstruction, or the obstruction may exist only during expiration, creating a check valve mechanism with obstructive emphysema. Such cases have been reported by Clerf,[20] Kernan,[15] Ballon,[16] Ornstein and Epstein [15] and by me.[21]

The only thing to account for the presence of tubercle bacilli in the expectoration of many patients is the presence of an active tuberculous lesion in the tracheobronchial tree. These patients have been given the benefit of apparently successful collapse therapy in the form of artificial pneumothorax or thoracoplasty, yet the sputum continues to contain specific organisms. In such patients the bronchoscopist will likely find an ulcerogranuloma which is not completely obstructive, the surface of the lesion feeding organisms into the bronchial lumen. As soon as the tuberculous process becomes completely obstructive the sputum becomes free from tubercle bacilli. This favor-



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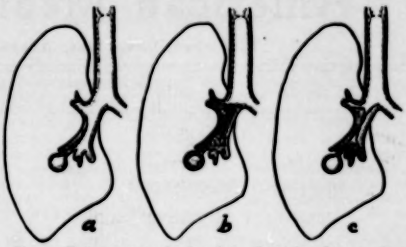

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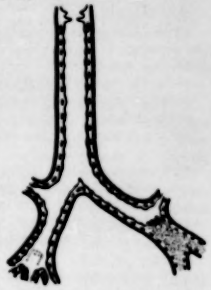

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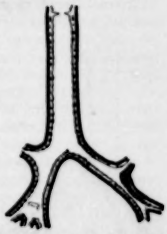

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able circumstance has been seen again and again. When fibrosis replaces the granuloma and a small lumen is restored, the sputum coming from the involved area continues uncontaminated. The source of contaminated sputum after a bronchial lesion has healed must be sought elsewhere.

Bronchoscopy is requested by clinicians to ascertain the presence of tuberculosis of the bronchial tree for the following reasons:

1. As a routine procedure before thoracoplasty.
2. The presence of tubercle bacilli in the sputum associated with a pulmonary lesion which should have been controlled by the previously induced pneumothorax, or thoracoplasty.
3. A spread of the disease to a healthy lung which was not expected on a basis of the existing pulmonary condition.
4. A wheezing, coarse, noisy type of breathing.
5. Unexplained atelectasis.
6. The presence of tubercle bacilli in the sputum despite apparently negative roentgenographic findings.

Examination with a bronchoscope never harms a patient or complicates a clinical picture if certain contraindications are kept in mind:

1. Active tuberculosis of the larynx should be respected. It is permissible to pass the bronchoscope through a healed larynx only if the laryngeal space is not narrowed. Bronchoscopy performed through the narrow airway of a healed larynx may reactivate tuberlosis or cause reaction necessitating tracheotomy. It should never be necessary if the larynx is carefully examined before bronchoscopy. In more than one thousand bronchoscopies of tuberculous persons not a single tracheotomy was required.

Recent hemoptysis or apparent debility are contraindications to use of a bronchoscope. Because the surface of the ulcerogranuloma is laden with bacilli the bronchoscope should not be forced through the partly obstructed bronchus. It is safer to use a smaller sized bronchoscope to prevent undue disturbance of the granuloma, especially if it has a superficial caseous coating. From such a surface tubercle bacilli may readily be disseminated to healthy areas of the lung. Further, a partly obstructive lesion may become completely so if a reaction results from undue manipulation.

The instillation of viscid material like iodized poppyseed oil for bronchography may completely block the small lumen of a fibrostenotic bronchus. Care should therefore be exercised in the selection of patients for this procedure.

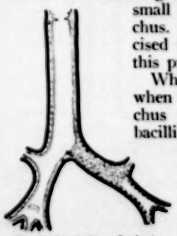

Fig. 7 (case 5).—Occlusion of left main bronchus by granuloma originating in upper lobe.

What is the value of pneumothorax when tuberculous disease of the bronchus is present? If the tubercle bacilli which are found in the sputum no longer come from the cavity in the lung but come from the surface of the ulcerogranuloma, then pneumothorax is of no value. One can conclude that the pulmonary cavity is already blocked off from the bronchial tree when the ulcerogranuloma is seen in the branch bronchus or main bronchus. The tubercle bacilli are no longer coming from the original focus but from the ulcerogranuloma. As soon as a bronchial lesion is observed, pneumothorax becomes superfluous, as it collapses all the functioning tissue unnecessarily.

The atelectasis which remains after fibrous tissue replaces the granuloma is confined to the disease-bearing area in the lower lobe and to the entire upper lobe. The 2 mm. passage which remains in the main bronchus after fibrosis is complete is sufficient to supply air to the uninvolved lung.

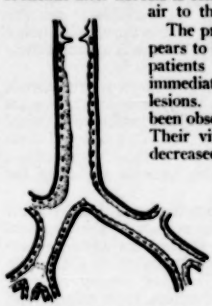

Fig. 8 (case 6).—Ulcerogranuloma extending from bronchus of upper lobe of right lung along tracheal wall to subglottic region.

The prognosis of these lesions appears to be very good. None of my patients have died because of the immediate effect of the bronchial lesions. Several patients have now been observed for five or more years. Their vital capacity is undoubtedly decreased; occasionally one is dyspneic on exertion. It must be borne in mind that occlusion of the main bronchus is a gradual process, affording the remaining lung, which fortunately often has little or no disease, ample opportunity to adjust itself to the increased demands made on it. The fact that the main bronchus does not remain occluded in a great majority of cases is important. Obstruction of the trachea sufficient to cause asphyxia and death, such as was reported by McConkey,[22] must be extremely rare. I have seen many tracheal lesions, none of which has been sufficiently extensive to menace the life of the person afflicted.

In a previous paper [23] it was pointed out that treatment of tuberculous lesions of the trachea and bronchus is not well founded. Their nature and extent precludes the possibility of carrying out any special form of treatment. A localized granuloma which fills the lower portion of the trachea, threatening asphyxia, can be treated by cautery puncture. This will cause immediate shrinkage of the tumor and reestablishment of the airway. However, such a lesion is extremely rare. But a granuloma which fills the main bronchus from its introitus down to the branches leading into the lower lobe of a lung cannot be successfully treated by any means at the command of physicians. Only the upper limit of the lesion is accessible; the intermediate and lowermost parts cannot be visualized or reached. Those who advocate various forms of local application and cauterization do not seem to appreciate the fact that the lesions in patient after patient heal spontaneously. The processes which the bronchoscopist encounters are evidence of nature's attempt to cure the disease. May not local therapy and manipulation be interfering with this generally favorable outcome? Some believe that cauterization of the upper limit of an advancing granuloma will stop its progress. Unfortunately this is not so, for the granuloma spreads during the interval between bronchoscopies. If the lesion is no longer active treatment is not necessary, for the stage of fibrosis is at hand. Aspiration is of value for the removal of caseous material which occludes the bronchus.

REPORT OF CASES

Case 1.—A 14 year old white girl was admitted to the hospital Aug. 7, 1938. During a routine school study two years

22. McConkey, Mack: Occlusion of the Trachea and Bronchi by a Tuberculous Process Complicating Pulmonary Tuberculosis, Am. Rev. Tuberc. **30**: 307 (Sept.) 1934.
23. Myerson, M. C.: The Limitations of Bronchoscopy in the Treatment of Tracheobronchial Tuberculosis, Ann. Otol., Rhin. & Laryng. **47**: 722 (Sept.) 1938.

earlier she was found to have pulmonary tuberculosis. She was given the benefit of artificial pneumothorax for disease of the upper lobe of her left lung. Despite the apparently successful collapse of her lung her sputum continued to contain tubercle bacilli.

Bronchoscopy was first performed on October 2. An ulcerogranuloma was found extending from the bronchial orifice of the upper lobe of the left lung along the superior wall of the left main bronchus as far as the lower end of the trachea.

In January 1939 there was evidence of occlusion of the left main bronchus, with a shift of the mediastinum to the same side. Bronchoscopy at this time disclosed a superficial ulcerogranuloma extending downward along the left tracheal wall to merge with a similar process, completely occluding the left bronchus. The sputum then showed no tubercle bacilli.

The patient was discharged in July. At that time there was evidence of reexpansion of the left lung. Bronchoscopy would have demonstrated a stenosed bronchus with a small passage through it; unfortunately it was not performed (fig. 3).

CASE 2.—A nurse aged 28 was referred for bronchoscopy in January 1939. Her right lung had been diseased since November 1937. Artificial pneumothorax had been done. Despite the apparently successful collapse of her lung, her sputum continued to contain tubercle bacilli.

Bronchoscopy revealed an ulcerogranuloma occupying the lateral wall of the right main bronchus from the region of the orifice of the middle lobe down to the lateral branch of the bronchus of the lower lobe of the right lung.

A second bronchoscopy, performed in March 1939, revealed an extension of the lesion to a point about 1 inch (2.5 cm.) above the bifurcation of the trachea.

Bronchoscopy was again performed in January 1940. The tracheal lesion had disappeared, but the main bronchus was completely filled by the ulcerogranuloma.

A fourth bronchoscopy was performed in May 1940. The ulcerogranuloma was found to be undergoing replacement of fibrous tissue. The entrance of the right main bronchus presented a 2 mm. opening which represented the beginning of a passage down into the lower lobe (fig. 4).

CASE 3.—A 35 year old white woman was referred by a specialist in diseases of the chest because she had suffered four episodes of atelectasis of the lower lobe of her left lung during the preceding six months. Localized bronchopneumonia had occurred during two of these. She first became ill in June with what appeared to be bronchitis. Tubercle bacilli could not be found in her sputum. Her physician suspected the presence of a foreign body or neoplasm in the left main bronchus. Bronchoscopy revealed an occlusion of the left main bronchus beginning at a point below the branch leading into the upper lobe of the left lung and characterized by white, flaky material. The removal of this caseous matter uncovered an ulcerogranulomatous process. Smears made from the flakes reacted strongly to tests for tubercle bacilli (fig. 5).

CASE 4.—A white man aged 38 was admitted in September 1939 complaining of cough, expectoration and hemoptysis. A pneumothorax had been induced on the left side; the right lung appeared free from disease. Bronchoscopy was requested because of a persistently tubercle bacillus-laden sputum despite the apparently good collapse. An ulcerogranuloma was found extending from the lateral branch of the bronchus of the lower lobe of the left lung to a point just below the upper bronchial orifice (fig. 6).

CASE 5.—A 45 year old white woman was admitted in November 1938 complaining of cough, expectoration and weakness. Her pulmonary condition had begun in 1931 with cough and hemoptysis. Despite the absence of the cavity after a three stage thoracoplasty the sputum continued to contain tubercle bacilli.

Bronchoscopy revealed a complete occlusion of the left main bronchus by a granuloma which had originated from the area of the upper lobe of the left lung (fig. 7).

CASE 6.—A white woman 27 years of age was referred for bronchoscopy by her attending physician. She complained of a "snoring" type of breathing which had lasted about four years. She had been treated for asthma; many tests for allergy had been done, all of which gave negative results. A roentgenogram revealed a small caseous pneumonic lesion of the upper lobe of the right lung. Recently the patient's sputum had shown tubercle bacilli. Bronchoscopy was requested because of the type of breathing noted.

The examination revealed an ulcerogranulomatous process extending from the subglottic region downward along the right lateral wall of the trachea and into the entrance of the bronchus of the upper lobe of the right lung (fig. 8).

SUMMARY AND CONCLUSIONS

The results of experiences gained from bronchoscopies performed on 580 tuberculous patients show that 160 had bronchoscopic evidence of tuberculosis. All but 12 had one of the three stages of endobronchial tuberculosis.

Except for the granuloma secondary to a perforating mediastinal gland, the bronchial lesion is always secondary to an ulcerous lesion in the lung parenchyma. Tuberculosis of the trachea and bronchus follows a definite course, the various stages of which are predictable.

Pneumothorax is superfluous once a bronchial lesion develops.

Treatment is of no value because of the nature and extent of the disease and because the bronchial lesions heal spontaneously.

136 East Sixty-Fourth Street.

ALCOHOLIC POLYNEURITIS

AN EVALUATION OF THE TREATMENT AT THE BOSTON CITY HOSPITAL FROM 1920 THROUGH 1938

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No subject today is possessed of more ramifications or is more colored by emotion than vitamins. Too many recent publications are based on a small, uncontrolled series of patients and a large amount of wishful thinking. In the evaluation which follows, no opinion is offered as to the part vitamins play either in the etiology or in the treatment of alcoholic polyneuritis. The question is not whether vitamins are necessary in the treatment of polyneuritis but how much of these substances regenerating neurons can utilize. Can they utilize more than are present in a diet adequate for a healthy person? In the hope of shedding light on this question, some figures on ward patients receiving the house diet are compared with those on patients receiving intensive vitamin therapy. It should be emphasized that the house diet is not deficient, that it is adequate in all vitamins and that it is a far better diet than that to which the majority of patients in the Boston City Hospital have been accustomed.

All the records bearing the diagnosis alcoholic polyneuritis at the Boston City Hospital during the years 1920 through 1938 were summarized with special attention to the objective evidences of damage to the peripheral nerve and the results of the various types of therapy given. The period from 1920 through 1938 was chosen because patients admitted in the first half of this period, that is 1920 to 1929, were given routine house diet with no additional vitamins, whereas the group admitted in the years 1930 to 1938 received exactly the same treatment as the first group with the

From the Neurological Unit, Boston City Hospital, and the Department of Neurology, Harvard Medical School.
Assistance in the preparation of this material was furnished by the personnel of the Works Progress Administration Official Project no. 17579.

exception that the house diet was supplemented by vitamins in the form of fruit juice, egg nog, salad, cod liver oil and vegex or brewers' yeast tablets. In addition, some of these patients were given parenteral injections of liver extract and thiamine, thus affording a comparison of the efficacy of the whole vitamin B group in the therapy of polyneuritis associated with chronic alcoholism.

The diagnosis of alcoholic polyneuritis was made six hundred and four times during the years 1920-1938. Of this number only two hundred and thirty-eight have been utilized for this study (tables 1, 2 and 3). The majority were excluded because the diagnosis could not be confirmed from a review of the record. A large number of the cases excluded were polyneuritis due to the ingestion of jamaica ginger, pressure neuritides of a single nerve and patients suffering with pain or neuritis as a complication of other diseases than chronic alcoholism. A few records were excluded because they did not contain sufficient information with regard to the condition of the patient on discharge. Patients with other complicating diseases were excluded as well as those who left the hospital against advice of the physician after a brief stay. Fifty-three patients died in the hospital and others were transferred immediately to mental hospitals. Outpatient records and social service records were included whenever available. The analysis, therefore, includes only patients with uncomplicated alcoholic polyneuritis discharged as improved or relieved. The length of stay in the hospital was considered the most significant factor in the evaluation of the various types of therapy.

TABLE 1.—*Average Length of Stay in Hospital of Patients with Alcoholic Polyneuritis Who Were Discharged with the Polyneuritis Well, Improved or Relieved; Intensive Vitamin Therapy Compared to House Diet*

	House Diet		High Vitamin Regimen	
Degree of Neuritis	Number of Admissions	Average Stay in Days	Number of Admissions	Average Stay in Days
Mild	51	17.9	34	21.2
Moderate	41	22.2	51	33.7
Severe	23	55.3	24	51.6
Very severe	3	181.3	9 *	97.7
Total	118		118	

* Five of these 9 patients transferred to hospitals for chronic diseases before recovery.

Careful examination of the records showed that the patients could be subdivided according to the severity of the neuritis as follows: 1. Mild, patients suffering with pain and tenderness of the legs only. 2. Moderate, patients with pain and tenderness of the legs plus partial foot drop and some loss of sensation of the feet and lower legs, together with absent ankle jerks. 3. Severe, complete foot drop plus some weakness of hands and sensory loss (severe in legs, mild in hands) and absent knee and ankle jerks. 4. Very severe, advanced polyneuritis with pain, complete foot and wrist drop, glove and stocking anesthesia and loss of all deep reflexes. The length of stay in the hospital was calculated and a comparison was made of the group in the years 1920 through 1929 with those admitted in the years 1930 through 1938.

ANALYSIS OF DATA

There were 118 patients who received only the house diet as compared with the 118 who received the special vitamin therapy. Table 1 shows the average stay in the hospital for these 236 patients. It can be seen from this table that there was no significant difference in the duration of the stay in the hospital of the two groups; that is, the vitamin treated and the not vitamin treated. In fact, the average length of stay in the hospital of the patients with a mild or moderate degree of neuritis was less for those who received no extra vitamins. Of the patients with a severe degree of neuritis the number was too small for an accurate comparison, although the figures given would indicate that those on a higher vitamin regimen stayed a shorter time in the hospital. This does not represent the actual facts, since 5 of the 9 patients receiving the high vitamin diet were discharged to hospitals for chronic diseases before recovery was complete.

TABLE 2.—*The Average Length of Stay in the Hospital of 44 Patients with Alcoholic Polyneuritis Who Received a High Vitamin Plus Liver Extract Parenterally as Compared with the 118 Patients Who Received Only the Routine House Diet*

	House Diet		Parenteral Liver	
Degree of Neuritis	Number of Admissions	Average Stay in Days	Number of Admissions	Average Stay in Days
Mild	51	17.9	8	29.2
Moderate	41	22.2	22	37.2
Severe	23	55.3	9	53.5
Very severe	3	181.3	5 *	79.8
Total	118		44	

All patients were discharged with polyneuritis well, improved or relieved.

* Four of these 5 patients transferred to chronic hospitals before recovery.

In an attempt to answer some of the following questions, the cases were further subdivided: 1. Did the addition of parenteral liver to the vitamins by mouth produce any appreciable effect on the duration of stay in the hospital? 2. Did the addition of thiamine hydrochloride, plus liver extract parenterally, materially affect the length of stay in the hospital?

In table 2 is shown the result with 44 patients who received parenteral liver in addition to the high vitamin diet as compared to the 118 patients who received only the routine house diet. From this table it is clear that the use of parenteral liver did not produce any shortening of the stay in the hospital of the patients with a mild, moderate or severe degree of neuritis. The apparent shortening of the stay of the five patients with very severe neuritis was due to the fact that, as already mentioned, 4 of these patients were transferred to hospitals for chronic diseases before complete recovery.

TABLE 3.—*Average Number of Days in Hospital of Patients Given Vitamin B Plus Intensive Vitamin Therapy Compared to Those Given House Diet*

	House Diet	Vitamin B	
Degree of Neuritis	Average Stay in Days	No. of Patients	Average Stay in Days
Mild	17.9	4	28.7
Moderate	22.2	3 *	18.6
Severe	55.3	3 †	37.6
Very severe	181.3	3 ‡	49.5

* One patient discharged unimproved.

† Two patients discharged with improvement in subjective symptoms only.

‡ Two patients transferred to chronic hospitals before recovery and 1 died in hospital.

V 19

The average length of stay in the hospital of the 13 patients who received high vitamin diet plus liver extract and thiamine parenterally (including 1 patient who died) is shown in table 3, as compared to the group that received only the house diet. As can be seen from this table, the average stay in the hospital for these patients was not appreciably influenced by the administration of the thiamine parenterally. The apparently shorter stay in the hospital of the 6 patients with severe or very severe neuritis is due to the fact that 1 of the patients died, 2 were transferred to hospitals for chronic diseases and two were discharged with improvement only in the subjective symptoms.

The results with the 8 patients studied in the Thorndike Memorial Laboratory, which have been previously reported by Dr. Strauss,[1] are shown in table 4, in comparison to the group of patients that received only the house diet. These 8 patients were given from 1 to 2 pints of whisky daily plus a high vitamin diet which included yeast and intramuscular liver extract. The results with these 8 patients cannot be compared with the other groups, since the conditions of the experiment were perhaps an important factor in prolonging the stay in the hospital.

It is interesting to note that of the 14 patients who were discharged as unimproved (and not included in the analysis) in spite of an adequate period of treatment in the hospital 8 had received special vitamin therapy. Also 29 of the 53 patients who died had received vitamin therapy.

TABLE 4.—*Average Number of Days in Hospital of Patients Given 1-2 Pints of Whisky per Day Plus Intensive Vitamin Therapy Compared to Those on House Diet*

	House Diet		High Vitamin Regimen	
Degree of Neuritis	Average Stay in Days	No. of Patients	Average Stay in Days	
Mild	22.2	6	87.6	
Moderate	55.3	2	113.0	

COMMENT

In 1933 Minot, Strauss and Cobb [2] studied 57 patients treated by a diet rich in complete protein, minerals and vitamins. They said in their article:

> It is our distinct impression that under this regimen recovery has been observed more uniformly and with greater rapidity than previously.
>
> However, evaluation of therapeutic results in the absence of a "yardstick" to measure such results is notoriously difficult, and in a condition of as chronic a nature as polyneuritis where regeneration of nerve tissue occurs only slowly at best, it is hazardous to interpret what causes benefit. Since patients were admitted in all stages of the disease, and in all states of health, it was impossible to compare intelligently and statistically the results of treatment with special diets and those obtained in other ways. Furthermore, dietary treatment has been employed routinely in recent years so that comparisons could be made only with cases treated by other individuals, and there appears to be no published data for proper statistical comparison; while hospital records do not furnish us with satisfactory information for such a purpose.

It is true that hospital records do not furnish us with all the information we should like, but the other difficulties mentioned have been surmounted in this study by discarding all records of patients with complicating diseases and by subdividing the patients according to the severity of their polyneuritis. As is stated, "regeneration of nerves occurs only slowly at best," and it is probable that, had these 236 patients been observed simultaneously, an accurate "yardstick" would have been difficult to find.

Jolliffe [3] studied 28 patients, placing 7 on a basic diet, 8 on the basic diet plus twice the requirement of vegex and 13 on a high calory, high vitamin diet plus four times the requirement of vegex. The diets were given for twenty-one days. No patient in the first group improved, and in fact 4 were worse. All the patients in the last two groups improved rapidly. It was reported that seven out of ten pairs of lost knee jerks returned in twenty-one days. These cases were not grouped according to the severity of the neuritis, but all were fairly mild and would for the most part correspond with our mild or moderately severe cases. Three of the group of patients receiving basic diet had foot drop. Two in the next series and only one of those receiving the most intensive vitamin regimen had foot drop.

Strauss's patients, of whom the involvement was mainly mild or moderately severe, were treated an average of fifty-three days, and although there was improvement in walking they did not regain their reflexes. Improvement in walking signifies loss of pain and tenderness in the feet and legs and improvement in strength of the muscles. This, after all, is the only "yardstick" which can be used, for the return of deep reflexes is a matter of many months. The patient with a very severe neuritis who was given intensive vitamin therapy and has been observed by me for many years in the outpatient department had his knee jerks return in ten months, but the ankle jerks did not reappear until seven years after the attack of polyneuritis.

Ability to walk is the main criterion used by interns in discharging patients in this series as well, improved or relieved. A busy medical intern, responsible for the treatment of many acutely ill patients, will discharge an alcoholic patient as soon as he can walk. If it were possible to have all the patients with a mild or moderately severe neuritis in the hospital at one time and divide them into two groups, on one side of the ward the house diet given, on the other intensive vitamin therapy, I doubt very much that we should have any better "yardstick" of the effect of the therapy than the length of stay in the hospital required before the patient was able to leave on his own feet. The results obtained among patients with severe or very severe neuritis are of little value, regardless of the type of therapy, since severe nerve degeneration has taken place and regeneration is a matter of many months.

SUMMARY

Two hundred and thirty-six patients with uncomplicated alcoholic polyneuritis were treated. The average time spent in the hospital of 118 patients on the house diet was compared with that of 118 on intensive vitamin therapy, and no significant difference was found. These patients were further subdivided according to severity of their neuritis and the amount of special vitamin therapy given. Forty-four patients had parenteral liver therapy and 13 had thiamine hydrochloride in addition. These patients were not dis-

1. Strauss, M. B.: Etiology of Alcoholic Neuritis, Am. J. M. Sc. **189**: 378 (March) 1935.

2. Minot, G. R.; Strauss, M. B., and Cobb, Stanley: "Alcoholic" Polyneuritis: Dietary Deficiency as a Factor in Its Production, New England J. Med. **208**: 1244 (June 15) 1933.

3. Jolliffe, Norman, and Colbert, C. N.: The Etiology of Polyneuritis in the Alcohol Addict, J. A. M. A. **107**: 642 (Aug. 29) 1936.

charged as relieved or improved in less time than those on oral vitamin therapy or than those on the house diet. The 8 patients receiving from 1 to 2 pints of whisky in addition to intensive vitamin therapy, including parenteral liver, stayed a longer time in the hospital than those on the house diet and no whisky.

CONCLUSION

The average time spent in the hospital by patients suffering from alcoholic polyneuritis who were discharged as well, improved or relieved was the same regardless of whether the routine house diet or intensive vitamin therapy in addition was prescribed. The economic aspect of this conclusion is apparent.

412 Beacon Street.

ELECTRIC ARC WELDING

THE EFFECTS OF WELDING GASES AND FUMES

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DETROIT

In the fabrication of heavier metal products, welding already has extensively replaced bolts and rivets. Automobiles, trucks, ships, tanks, refrigerators, bridges and road machinery are representative of products now manufactured with welding as the chief means for uniting metallic parts. Although scores of special terms designate particular varieties of welding, nearly all may be grouped under three categories, namely resistance (spot) welding, gas welding (chiefly oxyacetylene) and arc welding.

Electric resistance welding briefly may be described as instantaneous electric spot heating and fusing under pressure. This form of welding is almost entirely free from prospective injury to workmen from any produced gases or rays. Minor injury from flying sparks is a possibility, and occasionally cutaneous irritants are present in or are produced by oil that previously may have been coating the metal parts subjected to spot welding.

Gas welding is a more dangerous procedure, particularly when carried out in unvented, small, confined spaces. Numerous fatalities have been attributed to the presence of carbon monoxide, nitrous gases, impurities in the oxyacetylene mixture, such as phosphine or arsine, and to oxygen deficiency. In addition, the brazing wires and welding fluxes may introduce exposures of the worker in this form of welding, notably zinc, in brazing wires containing it as an extensive constituent, which may lead to metal fume fever. The composition of the metal on which gas welding is performed may provide further opportunity for injury of the worker, such, for example, as in welding on galvanized surfaces. The quality of ultraviolet emanations from gas welding is not such as to introduce more than casual dangers from this source.

In the third category of welding procedures, namely arc welding, exposures of the worker are of more serious nature and of greater diversification. This leads to the consideration of this industrial operation in greater detail.

From the Chrysler Industrial Hygiene Laboratories (Drs. Meek and Harrold) and the Industrial Health Conservancy Laboratories (Dr. McCord).

ARC WELDING

In arc welding, use may be made of ferrous electrodes or electrodes made of an alloy, either of which may be coated. Before we enter on a consideration of the exposures associated with any of these electrodes, it is desirable to mention and dispose of ultraviolet emanations and high temperatures common to the use of all these electrodes. It is not our object in this presentation adequately to discuss the extent or nature of ulraviolet or thermal exposures. It is here recognized that production of ultraviolet rays calls for extensive protection of eyes and skin and that the high temperatures involved introduce thermal exposures, particularly when welding is carried out in small work rooms. Reverting to the nature of the welding electrode, it may be shown that the bare steel welding rod, which ordinarily ranges in size from $\frac{3}{32}$ to $\frac{1}{8}$ inch in diameter, consists of approximately 99 per cent ferrous material, with a minor content of such constituents as manganese (e. g. 0.72 per cent) and carbon (e. g. 0.07 per cent). These mild steel electrodes customarily are dipped or washed in a lime and/or salt solution, which may thus introduce traces of calcium, chlorine in combination and other elements. In the case of the rod made of an alloy minerals other than iron may be present in quantities to cause concern because of the fumes created in welding which enter the atmosphere breathed by the welder. When manganese is present in such a percentage as 12, which is not usual, or chromium, up to 30, it becomes pertinent to inquire what ill effects may arise from the breathing of the welding fumes. Other metals, such as nickel, copper, zinc, magnesium, aluminum and possibly lead may enter the alloy used for welding electrodes, and their fumes may enter the atmosphere inhaled by welders. In general, it is good practice to use electrodes of a composition similar to that of the metal parts subjected to welding.

At the present time there is a trend toward the use of coated rods. The prime function of the coating is to provide a gaseous shield about the arc to the exclusion of the atmosphere and to create a slag for the protection of the weld prior to cooling. The presence of a gaseous shield about the arc is believed to lessen the quantity of nitrous gases produced from the bare rod arc, other circumstances such as voltage and amperage being equal. Coatings, which may be applied either to ferrous or to alloy rods, may represent secret formulas, but it is known that among other coating materials the following have been used: fluorides, silicates including asbestos, silica, titanium, borates, calcium carbonate, calcium hydroxide, barium carbonate, aluminum compounds, rubber, varnish, casein, gum arabic, bitumens and various cellulose materials, such as wood flour or jute. The high temperature of the arc may transform silicates to more harmful free silica, although no known cases of silicosis have been attributed to this source.

From this recital, so far, it appears that sources of exposure either potential or practical for arc welders are (1) the arc itself—ultraviolet emanations, heat, ozone, nitrous gases; (2) metallic electrodes—manganese, chromium, nickel, zinc, magnesium and other elements; (3) coating materials for electrodes—fluorides, silica, silicates, bitumens and other materials, and (4) oxygen deficiency—if the welding is carried out in unvented, confined spaces. Obviously these exposures, if and when they arise, are likely to be multiple.

THE WELDING ELECTRIC ARC

The occurrence of oxides of nitrogen, ozone and ultraviolet rays about the electric arc is brought about by mechanisms similar to those of the initial stage of atmospheric nitrogen fixation by the electric arc process. It is not known that these products are essential to welding, and they are regarded as extraneous. Obviously, high temperature (around 6,500 F., 3,593 C.) is the prime requirement in connection with arc welding. No less, the welding arc may give rise to ozone immediately in and near the arc and to various oxides of nitrogen, but chiefly nitric oxide and nitrogen dioxide. Because of reversibility and instability between these gases, laboratory reference is chiefly to nitrogen dioxide, the most stable of the harmful varieties but in itself not the most harmful.

Traditionally, 39 parts of nitrous gases per million parts of atmosphere has been accepted as the threshold of prospective damage to welders. This is based on remote and inconclusive work.[1] More recently [2] it has been claimed that as little as 10 parts per million of nitrogen dioxide may be the source of headache, fatigue and other trivial manifestations of impairment. It is believable that headache among arc welders exposed only to trivial quantities of nitrous gases is more likely to be caused by the wearing of heavy and tight-fitting shields necessary for protection against ultraviolet rays, or by injuries to the eyes from electric flashes or fatigue from hampered vision through colored eyeshields.

TABLE 1.—*Average Quantities of Nitrous Gases with Voltage Used*

Volts	Average, Parts per Million	High Average, Parts per Million
27	29	32
31	33	42
33	40	47
44	70	84

TABLE 2.—*Duration of Exposure of Experimental Animals to Various Concentrations of Nitrogen Dioxide*

	Number of Animals	Weight Change	E	Time	NO_2 P.P.M. S.T.P.	E Hrs.	E Min.
E. 1—voltage 27	27 rabbits	+11.04 oz.	High	1	21	11	08
	24 rats....	+12.29 Gm.		2	32	50	40
			Gen. Av.	1	20	38	00
				2	29	190	00
E. 2—voltage 33	11 rabbits	+ 1.39 oz.	High	1	32	9	20
	24 rats....	—19.16 Gm.		2	47	45	28
			Gen. Av.	1	27	35	00
				2	40	170	00
E. 3—voltage 44	11 rabbits	+ 5.95 oz.	High	1	60	6	40
	20 rats....	+ 6.9 Gm.		2	84	33	20
			Gen. Av.	1	51	25	00
				2	70	125	00
E. 4—voltage 31	12 rabbits	+ 3.245 oz.	High	1	29	5	20
	9 rats....	+ 8.37 Gm.		2	42	26	40
			Gen. Av.	1	22	20	00
				2	33	100	00
Controls							
Exposure 1....	12 rabbits	+ 8.25 oz.					
	11 rats....	+ 8.5 Gm.					
Exposure 2....	12 rabbits	+ 5.29 oz.					
	11 rats....	+ 0.91 Gm.					
Exposure 3....	12 rabbits	+ 4.52 oz.					
	12 rats....	+ 5.4 Gm.					
Exposure 4....	4 rabbits	+ 9.75 oz.					
	7 rats....	+47.57 Gm.					

E = Exposure. Time— 1 = 8:30 a. m.-9:30 a. m.; 2 = 9:30 a. m.-2:30 p. m.

At the present time there prevails some apprehension that unusual dangers frequently may attend arc welding operations because of nitrous gases produced from the surrounding atmosphere and because of a rapidly increasing number of substances being introduced into the alloy of electrodes and electrode coatings. Especially there prevails uncertainty as to safe limits of exposure. The figures just cited of 39 and 10 parts per million for nitrous gases are regarded with suspicion.

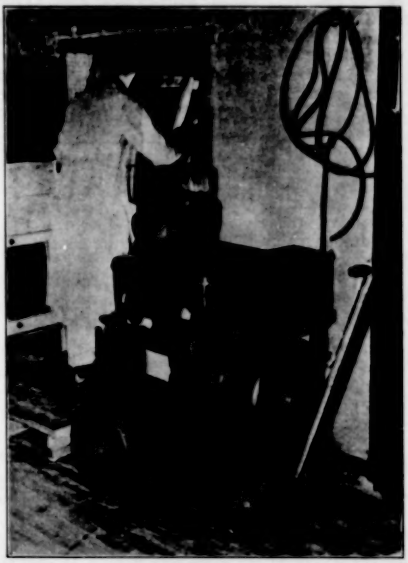

Fig. 1.—Corner of exterior of experimental welding chamber showing arc welding machine and arrangement for welding through portholes in chamber wall.

Recognizing the complexity of theoretical arc welding exposures and the inadequacy of investigative work related to conservation of workers' health, a study has been made of the simplest form of arc welding, namely welding with ferrous uncoated electrodes. A more extensive report has been published.[3] In the absence of opportunity here to present any background of the literature, reference is made to a noncritical review by Britton and Walsh.[4]

For the purposes of this study there was provided a gas-tight chamber of 1,000 cubic feet capacity with its air exhaust system so dampered as to provide only one

EXPERIMENTAL ARC WELDING

1. Lehmann, K. B., and Hasegawa: Arch. f. Hyg. **77**: 323, 1913.
2. Occupational Diseases Cause Human Waste: Causes and Prevention of Nitrous Fumes Poisoning, Industrial Health Series, 14, United States Department of Labor, Division of Labor Standards, 1939.
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change of atmosphere hourly. In this chamber, arc welding was carried out with the operator on the outside manipulating the welding material through arm ports (fig. 1).

In order to control the high temperatures that are induced by welding, an air-cooling system was introduced. At all times suitable baffles were interposed between sources of ultraviolet irradiation and experimental subjects. In this chamber, numerous groups of animals (253 rabbits and rats, including 87 controls) were exposed five days a week, six hours a day, for long periods later specified, represented by weeks rather than by a few hours. A limited number of exposures was extended to men who entered the gassing chamber. Suitable analyses were made to rule out the occurrence of injury from such causes as oxygen deficiency, carbon dioxide, carbon monoxide, chlorine from the rod washings and excessive humidity. Chief concern centered about the relative quantities of nitrous gases produced by increasing electric voltage and amperage across the arc, although such electric states were comparatively constant for any one experiment. Equal significance was attached to the action of these nitrous gases on laboratory animals. Lesser import was attached to the quantity and action of the metallic fumes arising in the welding operations and the quantity of ozone present about the arc.

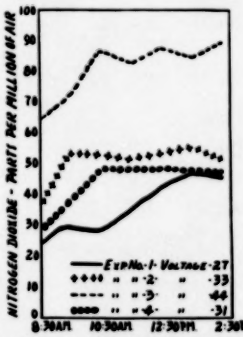

Fig. 2.—Average concentration of nitrogen dioxide in parts per million of air on hourly basis for four experiments with increasing voltage.

Since practical arc welding on thin steel in certain industries ordinarily utilizes a voltage near 30, the experimental voltages chosen were in this general zone, beginning with 27 and continuing through 31 and 33, with a maximum of 44 volts. The corresponding amperage was 180 to 200, 200 to 250 and 300 to 350.

Readily it became apparent that with every increase in the voltage across the arc the quantity of nitrous gases also increased. The respective average quantities of nitrous gases (computed as nitrogen dioxide, NO_2) are given in table 1. The high average mentioned in table 2 refers to the average concentration exclusive of the first hour of animal exposure during which the gaseous level is being built up. The figures shown in figure 2 represent averages but fail to indicate the maximum peaks. Thus in the experiment with 44 volts a high average concentration of 84 parts per million was attained, but in this experiment, an overall maximum of 135 parts per million was attained, and in many tests made immediately at the end of the welding operation the concentration was in excess of 100 parts per million. In the aggregate, more than twenty-four hundred analyses of gas and fumes were made, giving rise to these figures mentioned only casually and to others not here included.

Prior analysis of the iron electrode indicated that the percentage of iron present approximated 99, with a content of manganese of 0.72 and of carbon of 0.072. In the welding process, much iron was introduced into the atmosphere as a metallic fume. The quantity ranged from 35 mg. to 398 mg. per cubic meter of air. However, the quantity of metallic fumes increased only irregularly with a rising voltage and on occasion was lower with a higher voltage. The determination of the quantity of metallic fumes present constitutes no index of the nitrous gases simultaneously present. The maximum quantity of manganese encountered was 3.3 mg. per cubic meter of air.

In the investigation a welding cycle was provided in which for twelve minutes in each half hour of the six hour day as many rods were consumed as was possible with a specific voltage. For the four voltages utilized, the respective consumption of $\frac{5}{32}$ inch rods was as follows: with 27 volts, 7 pounds; with 31 volts, 10 pounds; with 33 volts, 11 pounds, and with 44 volts, 19 pounds. During the remaining eighteen minutes of the one-half hour welding cycle, samples of gas for analyses were collected respectively immediately after the cessation of welding, four minutes later, ten minutes later and sixteen minutes later, at which time a new welding cycle began.

In view of the large quantities of nitrous gases produced, which were much in excess of that quantity heretofore regarded as capable of inducing pulmonary edema, it was anticipated that exposed animals promptly would evince signs of pulmonary injury. In experiment 1 (27 volts) 41 animals were exposed for a period of thirty-eight days, with an elapsed time of fifty-two days. In experiment 2 (33 volts) 35 animals were exposed for thirty-five days, with an elapsed time of fifty-six days. In experiment 3 (44 volts) 36 animals were exposed for twenty-five days, with an elapsed time of forty days. In experiment 4 (31 volts) 23 animals were exposed for twenty days, with an elapsed time of twenty-six days (table 2). In no single animal did there appear any macroscopic pulmonary edema or edema at any point along the respiratory tract. In one experiment no animal in the group died, and in other experiments the few deaths that arose could not be associated with any action of welding products; nor were these infrequent deaths at any higher rate than among the control groups. Some animals were killed for autopsy purposes during the experimental periods, some were killed for examination immediately at the termination of the experiment, some at intervals thereafter and some animals have been retained for periods greater than one year after exposure. At no time has there appeared any indication of ill effects from this prolonged gassing and exposure to fumes except the regular presence and migration of iron pigmentation within the lungs and other portions of the pulmonary system, including the various glandular groups, and low percentages of methemoglobin.

Since ozone is a gas of known highly irritant properties, and since its occurrence as a result of the electric arc has been both claimed and denied, appropriate analyses were made. It was found on the average that within the arc itself or as near it as samples of gas might be collected the quantity of ozone present was at 44 volts 1 inch from the arc 10 to 30 parts per million, 4 inches from the arc, 1 to 4 parts per million and at the center of the chamber 0.25 to 1 part per million, all

V 19

samples being collected during welding. It is believed that the ozone produced in the arc enters into the formation of nitrous oxides produced and is thus largely consumed. The threshold of injurious action of ozone is not well established. Such quantities as 0.04 [5] and 1 [6] part per million of air have been proposed as threshold limits, but the true maximum tolerable concentration may be higher. In any event, there has arisen no reason for the belief that the animals in this series of experiments have been exposed to ozone in harm-producing quantities.

For one period only, of three hours, two laboratory workers were present in the gassing chamber at a time when the nitrogen dioxide content peaked at 103 parts per million for five minutes, with a high average of 93 parts per million for forty minutes and a general average of 84 parts per million for the entire period. At this time, the temperature of the chamber was 97 F. (36.1 C.), and the ozone content was approximately 0.4 part per million. These observers were unprotected except for coverings of gauze to ward off the particulate iron fumes. No ill effects whatever were experienced by these observers with the exception, in one, of trivial irritation of the skin of the face, which possibly may be attributed to thorough scrubbing after exposure.

COMMENT AND SUMMARY

In this abridged presentation, descriptive of a twenty-one months investigation of arc welding in which bare ferrous electrodes were used, sufficient evidence has been introduced to throw some doubt on the reliability of those figures now widely accepted as representing the threshold of prospective injury from nitrous gases created in industrial welding. So far as conclusions may be reached from animal experimentation, it appears that the zone of beginning danger from nitrous gases lies above 70 parts per million of air and not in the zone of 10 to 40 parts per million. The animals utilized are known to be highly responsive to the action of pulmonary irritants. The entire absence of edema of the respiratory tract from quantities of nitrous gases in excess of those likely to arise from welding with 44 volts and 300 to 350 amperes augurs against the prospect of any widespread injury to welders operating under the milder conditions of practical welding and apart from confined spaces. Although large quantities of iron fumes were produced along with measurable quantities of manganese fumes from the welding rods, no result has indicated that these fumes are specifically harmful even though discomforting. Ozone, a known irritant, apparently enters into formation of nitrous gases but is not present in the surrounding atmosphere in sufficient concentration to cause harm. While the actuality of deaths and direful injury in practical arc welding operations may be granted, such injuries should not axiomatically be associated with nitrous gases as the sole possible causative agent. Increasing consideration should be extended to the roles that may be played by oxygen deficiency, manganese, fluorides, zinc, possibly chromium and some other minerals and metals now gaining in application in arc welding operations.

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SERUM AND TISSUE PHOSPHATASE DETERMINATIONS

AS AN AID IN EVALUATING THE RADIATION THERAPY OF BONE TUMORS

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Radiation therapy may be employed for its palliative or curative effect as the only method of treatment of some bone tumors, especially metastatic disease of bone, or it may be used preoperatively as a preliminary to amputation either as an elective measure or while the physician awaits consent for surgical intervention. The latter procedure is frequently followed in the management of certain types of osteogenic sarcoma.

The effect of irradiation may be measured by the degree of symptomatic relief, by variations in the size of the tumor, by the roentgenographic appearance or by microscopic examination of the tissue. In the clinical study of a large number of patients in whom estimations of serum and tissue phosphatase were done, we were impressed by the close correlation of the phosphatase values with the clinical features. The results of the study thus prompted are herewith submitted.

METHODS

The alkaline phosphatase of the serum was determined by the method of Bodansky [1] as modified by one of us.[2] Normal values are from 1.5 to 5 units per hundred cubic centimeters for adults and from 5 to 13 units for children according to the rate of growth. The acid phosphatase of the serum was determined at p_H 6.4 in an unbuffered sodium glycerophosphate substrate. Normal values for acid phosphatase do not exceed 10 per cent of the alkaline phosphatase of the same serum and are usually less than 5 per cent of the alkaline value.

Tissue phosphatase was determined by our modification [3] of the method of Franseen.[4] An attempt was made to obtain material which was representative of the tumor as a whole by using a slice 3 to 5 mm. thick made with a motor saw through the entire mass. This included portions of both the center and the periphery. When the tissue was too soft to be sawed, samples were cut with a knife from different parts and were then combined for extraction.

Most of the tissue radiation doses were calculated by Dr. Edith Quimby of this hospital.

Previous work by us as well as by others makes it evident that the excess phosphatase which appears in the serum of many patients with bone tumors originates in the tumors and that the decrease in serum phosphatase following radiation therapy or surgical extirpation is due to inactivation or removal of the tumor. In order that there should be no doubt on this question, we have determined the tissue phosphatase on a series

From the Bone Tumor Department, service of Dr. Bradley L. Coley, and the Chemistry Department, Memorial Hospital.

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of benign and malignant bone tumors which had not been irradiated and compared the results with those for osteogenic sarcomatous tissue which had been irradiated prior to amputation. The observations on nonirradiated tumors are summarized in table 1. In this table, the tissue phosphatase is correlated with the of the tumor. In two of the semimalignant tumors (in cases 3 and 8) the tissue phosphatase was low, while in one (case 9) it was definitely elevated. On one frankly malignant giant cell tumor (case 10) a tissue phosphatase level of 0.79 unit per gram was associated with an elevated serum phosphatase which failed to fall

TABLE 1.—*Serum and Tissue Phosphatase in Patients with Nonirradiated Tumors*

Case	Name	Age	Sex	Diagnosis	Volume of Tumor, Cc.	Tissue Phosphatase, Units per Gm.	Serum Phosphatase, Units per 100 Cc. Before Operation	Serum Phosphatase, Units per 100 Cc. After Operation
1	F. B.	38	♀	Osteochondroma, left femur	520	0.10	2.5	...
2	S. K.	20	♂	Osteochondroma, left femur	266	0.34	4.4	5.0
3	L. B.	28	♀	Semimalignant osteochondroma, left femur	13	0.41	5.3	3.4
4	M. T.	17	♀	Fibrosing giant cell tumor, left femur	65	0.23	3.5	...
5	A. K.	46	♂	Giant cell tumor, right femur, recurrent, no unusually aggressive features	500	0.23	5.4	4.4
6	M. W.	50	♀	Benign giant cell tumor, left tibia	65	0.10	4.3	...
7	A. G.	21	♀	Benign giant cell tumor, left fibula, recurrent	150	0.20	4.6	3.4
8	M. B.	42	♂	Giant cell tumor, right femur, possibly potentially malignant	65	0.10	5.1	4.4
9	F. W.	30	♀	Giant cell tumor, right tibia, atypical with malignant possibilities, recurrent	113	0.75	3.8	2.3
10	L. S.	35	♂	Giant cell tumor transitional to telangiectatic osteogenic sarcoma, left femur	200	0.79	6.8	7.0
11	M. A.	47	♀	Malignant giant cell tumor, left patella	88	0.10	3.1	2.7
12	J. L.	60	♂	Osteogenic fibromyxosarcoma, left femur	640	0	3.6	4.2
13	M. R.	54	♂	Medullary spindle cell osteogenic sarcoma, left femur	266	0.05	3.7	3.0
14	J. S.	26	♂	Large spindle cell osteogenic sarcoma, right femur	420	0.47	3.5	...
15	L. B.	13	♀	Spindle cell chondrosarcoma, low malignancy, right ilium	1,800	....	9.8	...
				Ossifying portion	...	0.57		
				Nonossifying portion	....	1.7		
16	L. B.	30	♂	Chondrosarcoma, right fibula	620	1.8	3.0	3.5
17	S. S.	16	♀	Osteogenic sarcoma, largely spindle cell type, left tibia	27	3.0	5.8	5.1
18	C. H.	29	♂	Osteogenic tumor of borderline malignancy, right tibia	267	3.0	15.9	5.0
19	W. R.	25	♂	Small spindle cell osteogenic sarcoma (fibrosarcoma, medullary) with some chondrosarcomatous parts, left femur	910	3.0	4.4	...
20	C. B.	58	♀	Osteogenic chondrosarcoma, left femur	2,130	6.2	5.6	11.6
21	F. P.	17	♀	Osteogenic sarcoma, right femur	930	17.5	21.1	4.1
22	S. D.	15	♂	Osteogenic sarcoma, highly malignant, right tibia	524	18.4	7.2	...
23	D. S.	13	♂	Osteogenic sarcoma, fibrocartilaginous, favorable type, right femur	113	22.0	11.7	5.2
24	F. R.	20	♂	Osteogenic sarcoma, left humerus	575	....	7.0	5.4
				Active spindle cell portion	...	30.0		
				Slow-growing hyaline portion	...	20.0		

TABLE 2.—*Serum and Tissue Phosphatase in Patients with Irradiated Tumors*

Case	Name	Age	Sex	Diagnosis	Tumor Dose, Tissue Roentgens	Tissue Phosphatase, Units per Gm.	Serum Phosphatase, Units per 100 Cc. Before Irradiation	Serum Phosphatase, Units per 100 Cc. After Irradiation
1	S. L.	44	♀	Osteogenic sarcoma, left femur, sclerosing type	1,350	16.0	28.3	....
2	L. H.	20	♂	Osteogenic sarcoma, right femur, telangiectatic and osteoplastic	1,300	2.8	24.0	....
3	A. C.	19	♀	Medullary spindle cell sarcoma, right femur, type somewhat unusual	1,000	0.13	14.0	....
4	L. H.	18	♂	Telangiectatic osteogenic sarcoma, left femur	2,100	2.1	....	17.2
5	H. G.	13	♂	Osteogenic sarcoma, left femur; no visible radiation changes	5,300	....	16.5	10.3
				Periphery of tumor	.....	0.82		
				Center of tumor	.....	0.34		
6	B. H.	17	♂	Osteogenic sarcoma, right femur; marked radiation changes	3,775	0.18	19.5	6.4
7	M. R.	15	♂	Periosteal and medullary osteogenic sarcoma, right femur; largely acellular from radiation	4,000	0.27	12.6	...
8	S. G.	16	♂	Osteogenic sarcoma, left femur, partly sclerosing, partly small spindle cell sarcoma; no conspicuous radiation changes	4,100	0.15	27.3	16.5
9	G. D.	11	♀	Osteogenic sarcoma, right femur; extreme radiation changes	4,300	0.05	11.3	7.7
10	G. S.	16	♂	Osteogenic sarcoma, right femur, fully viable; possibly slight radiation changes	4,600	10.8	9.2	9.6
11	S. S.	16	♀	Osteogenic sarcoma, left humerus, almost totally necrotic from irradiation	6,800	0.15	12.2	3.5
12	W. K.	12	♂	Osteogenic sarcoma, right femur, apparently sterile from irradiation	8,000	0.08	11.4	5.8
13	A. M.	7	♀	Osteogenic sarcoma, left femur, viable after irradiation	9,000	0.22	85.5	13.5
14	D. C.	15	♂	Large polyhedral cell osteogenic sarcoma, right humerus	2,700	Tissue not available for examination	9.0	4.5
15	J. S.	12	♂	Telangiectatic osteogenic sarcoma, left femur	3,000	Tissue not available	17.9	13.4
16	D. L.	7	♀	Osteogenic sarcoma, right femur (diagnosis by biopsy)	4,000	Tissue not available	15.8	8.8
17	W. K.	28	♂	Cellular osteogenic sarcoma with good deal of calcific material, right tibia (diagnosis by biopsy)	4,750	Tissue not available	13.2	5.5
18	D. C.	17	♀	Osteogenic sarcoma, right femur	5,300	Tissue not available	24.4	2.8

serum phosphatase before and after removal of the tumor. Since a large tumor will obviously have more effect on the serum than a small one, a rough approximation of the volume of the tumor is also given.

The tissue phosphatase of the benign osteochondromas and giant cell tumors ranged from 0.10 to 0.50 unit per gram, or about the same as normal adult bone. The serum phosphatase was usually in the upper range of normal and showed little change after removal after operation because of prompt recurrence and metastasis. In the other malignant giant cell tumor (case 11), the tissue phosphatase was low and the serum phosphatase was normal.

In the group of osteogenic sarcomas a wide range of both tissue and serum phosphatase was found. The initial serum readings in cases 15, 17 and 22 are within the normal range for the ages of the patients. The absence of close correlation between serum phosphatase,

tissue phosphatase and the size of tumors is too obvious to require detailed consideration. It is not clear, for example, why patient 18, with a moderate-sized tumor containing 3 units of phosphatase per gram, had 15.9 units of phosphatase per hundred cubic centimeters of serum, while patient 19, with a rather large tumor which also contained 3 units per gram, had a normal level of serum phosphatase. Patient 19 showed some unusual features which are discussed in detail later.

Fig. 1 (case 1).—Osteogenic sarcoma of left femur, untreated. Serum phosphatase 83.5 units per hundred cubic centimeters.

Although some patients with tumors containing large amounts of phosphatase had normal serum values, yet no patient with a tumor containing less than 0.5 unit of phosphatase per gram had a serum phosphatase level which was conspicuously elevated or one which dropped significantly after removal of the tumor. Similarly, all the patients with high serum phosphatase values (patients 10, 18, 21, 23 and 24) had tumors containing relatively large amounts of phosphatase. Three of these patients (18, 21 and 23) showed a prompt drop in serum readings after amputation. In 2 (10 and 24), the failure of the serum phosphatase to fall to normal was due to the presence of residual and metastatic disease. Thus, while there is no explanation at present of why the presence of a tumor containing large amounts of phosphatase sometimes fails to raise the serum level, it is evident that a high serum phosphatase level indicates the presence of a tumor of high content of phosphatase.

Phosphatase readings on irradiated osteogenic sarcomatous tissue are summarized in table 2. All the cases listed showed elevated serum phosphatase readings before the beginning of radiation therapy. As explained in the previous paragraph, one may therefore assume that the phosphatase content of the tumor was originally high. Some of these cases are considered in detail later. It is seen that in 6 of the 7 tumors which received a tissue dose of 4,000 roentgens or more the level of phosphatase was less than 0.3 unit per gram, or about the same as normal bone. In 4 cases (9, 11, 12 and 13) the serum phosphatase showed a marked decrease after irradiation and before amputation. In case 8 a satisfactory drop in serum phosphatase was not obtained because there was disease outside the irradiated field, and in case 7 a postirradiation determination of serum phosphatase was not done. In contrast to these heavily irradiated tumors, 4 of the 6 which received a tissue dose of 1,350 to 3,775 roentgens contained significant amounts of phosphatase. A serum phosphatase reading was not obtained on one of these (case 4) until the close of the radiation cycle, but since the value found was high it served to confirm the presence of enzyme in the tissue. In cases 3 and 6, tissue doses of 1,600 and 3,775 roentgens respectively were sufficient to inactivate the phosphatase-forming mechanism of the tumors. In case 6 this inactivation was reflected in a marked drop in serum phosphatase, while in case 3 a postirradiation reading of serum was not obtained.

The observations on 1 case not included in the table are of special interest:

A. B., a woman aged 35, had a chondrosarcoma of the left humerus which had been irradiated at another hospital. The treatment was said to have consisted of 1,500 roentgens to each of two fields, but the factors were not known sufficiently accurately to permit of calculation of the tissue dose. The skin was tanned so that the area of irradiation was clearly outlined. The serum phosphatase was normal. Interscapulothoracic amputation was performed, and it was found that the tumor extended beyond the irradiated area. The irradiated tumor contained 0.33 unit of phosphatase per gram and the unirradiated tumor 33 units per gram, or one hundred times as much.

The data just presented afford direct evidence that when a patient with a primary bone tumor has an elevated serum phosphatase level the excess phosphatase in the serum comes from the tumor. When irradiation of the tumor is followed by a fall in the serum phosphatase, the fall is due to inactivation of the phosphatase-forming mechanism of the tumor.

In 5 additional cases, the serum phosphatase was determined before and after irradiation, but the tissue was not available for examination. These are also summarized in table 2. In cases 14, 16, 17 and 18, administration of tissue doses of 2,700, 4,000, 4,750 and 5,200 roentgens to the tumors was followed by a fall in the serum phosphatase to values which were nearly or quite normal for the ages of the patients. In case 15, the irradiated tumor undoubtedly contained residual phosphatase activity as the serum phosphatase level fell to 4.6 units per hundred cubic centimeters after amputation at a later date.

Fig. 2 (case 1).—Condition at the completion of roentgen therapy, showing that the size and degree of calcification of the tumor increased during treatment.

One may combine the two series by considering the attainment of normal phosphatase values either in the tumorous tissue or in the serum as a criterion of the inactivation of the tumor by irradiation. One thus finds that only three of the eight tumors receiving less than a 4,000 roentgen tissue dose were inactivated, while nine of the ten tumors receiving 4,000 to 9,000 roentgens were inactivated. From these figures, it appears that a tissue

dose of 4,000 roentgens or more is required to cause inactivation of the majority of phosphatase-producing osteogenic sarcomas. While there were some exceptions, in general the chemical and histologic signs of inactivation corresponded rather closely.

Fig. 3 (case 1).—Condition two weeks after the completion of roentgen therapy, showing that growth had ceased but that calcification was continuing. Serum phosphatase 13.5 units per hundred cubic centimeters.

The details of the changes produced by irradiation are best illustrated by consideration of individual cases:

Case 1.—(case 13 in table 2).—A. M., a girl aged 7 years, had an osteogenic sarcoma of the lower part of the left femur. The tumor showed only a small amount of formation of new bone (fig. 1), but the serum phosphatase level was high at 83.5 units per hundred cubic centimeters. Preoperative roentgen therapy totaling 9,000 roentgens to the center of the tumor was given over a period of four weeks, each treatment being preceded by diathermy. At the close of the cycle of irradiation a roentgenogram showed that both the size of the tumor and its degree of calcification had increased somewhat (fig. 2). Two weeks later there was no further increase in size and a slight further increase in calcification (fig. 3). At this time, the serum phosphatase level was 13.5 units, somewhat above normal for a rather sick child of 7 but 70 units lower than the initial value. At amputation three days later the tumor appeared almost wholly necrotic to gross examination, but careful microscopic study disclosed fully viable areas. The tissue phosphatase level was low at 0.22 unit per gram. There was a drop in serum phosphatase ten days after amputation to a normal value of 8.5 units. Three months later, the serum reading had risen to 30 units and pulmonary metastases were found which soon caused death.

While the slight drop in serum phosphatase which was observed after amputation showed that some areas of the tumor must have contained more phosphatase than the specimen taken for chemical analysis, yet it is evident that radiation therapy resulted in an enormous inactivation of the phosphatase-producing mechanism of the tumor as a whole. Despite this, there was a definite increase in the degree of mineralization of the tumor. In a previous publication, we expressed the opinion that when a high serum phosphatase level is found associated with a tumor showing little formation of new bone the rate of growth has outstripped the rate of deposition of calcium phosphate. As more material of this type has become available, we have found by measurement of roentgenograms that while radiation therapy is usually followed by both cessation of growth and increase in the formation of bone the increase in mineralization usually begins before growth has ceased. When serum phosphatase determinations have been made during treatment as well as before and after, it has been found that the drop is rapid. One thus has the situation that mineralization begins before growth stops but after the phosphatase-producing mechanism has been inhibited. We are therefore led to modify our previous opinion that the untreated tumors have simply not had time to calcify and to conclude that there is something in the metabolism of the rapidly growing tumor which is unfavorable to the deposition of calcium phosphate. No suggestion as to the nature of this factor can be made at present, but it is evident that it is inhibited more completely by radiation therapy than is the mechanism of mineralization since calcification can take place in the irradiated tumor even after the supply of phosphatase is much reduced.

Table 3.—*Phosphatase Content and Radioactivity of Tumor*

Tissue	Phosphatase, Units per Gm.	Radioactivity, Percentage of Total Dose per Kg. of Tissue
A. Center of main tumor of femur	0.34	3.7
B. Periphery of main tumor	0.82	11.0
C. Extension in shaft	0.68	6.5
D. Control—normal fibula shaft	0.20	2.8

While these differences in the rates at which the various types of inhibition caused by radiation appear are of considerable theoretical interest, they may in general be disregarded in practice. The changes in serum phosphatase usually correspond so closely to the subsequent clinical course that they may be taken as a reliable indication of the effectiveness of treatment. In most of our patients in whom an osteogenic sarcoma which had been controlled temporarily by irradiation later showed renewed activity, the chemical signs of reactivation preceded rather than followed the clinical signs.

Case 2 (case 16 in table 2).—D. L., a girl aged 7 years, had an osteogenic sarcoma of the lower part of the right femur. This was pronounced on aspiration biopsy to be of a bad type. There was a moderate degree of osteoplasia (fig. 4). The serum phosphatase level, while definitely elevated at 15.8 units, was not extremely high. The family refused permission for amputation, and the patient was given a course of roentgen therapy totaling 4,000 roentgens to the tumor. This resulted in a drop in serum phosphatase to 8.8 units, a value within the normal range for a child of 7. Symptoms were relieved, the growth of the tumor ceased and there was some calcification at the center though not at the periphery. The patient was lost sight of for nine months, after which interval she reappeared with an osteoplastic tumor 17 cm. in diameter and a serum phosphatase level of 24.9 units (fig. 5). Permission for amputation was finally obtained and, although the child appeared almost moribund, she made a good recovery from the operation. The serum phosphatase level was 4.8 units per hundred cubic centimeters two weeks after amputation and rose to 9.5 units in another two months, probably because the general health had improved and bodily growth had been resumed. The tissue phosphatase level of the tumor was 4.2 units per gram.

Fig. 4 (case 2).—Osteogenic sarcoma of the right femur at the completion of roentgen therapy. Serum phosphatase 8.8 units per hundred cubic centimeters.

Most of the huge mass of this tumor was formed after the close of radiation therapy, but because of the possibility that some residual effect of irradiation may have been present, the material is not included in the list of untreated tissues. The case illustrates the effectiveness of a dose of 4,000 roentgens in inactivating a phosphatase-producing tumor and the clinical and chemical reactivation which followed a quiescent period.

Serial determinations of serum phosphatase during treatment may be of value even when the initial readings are normal. This is well illustrated by the next case:

CASE 3 (case 19 in table 1).—W. R., a man aged 25, presented himself with a lesion of the lower part of the left femur resembling a benign giant cell tumor. The serum phosphatase level was normal at 3.7 units per hundred cubic centimeters. He received three courses of roentgen therapy over a period of eight months before he was seen in the Bone Tumor Department. The tissue doses were 2,700, 1,000 and 340 roentgens. Despite this, the serum phosphatase level rose irregularly to 6.6 units per hundred cubic centimeters, and clinical signs of activity led to amputation. The tumor was found to be an osteogenic sarcoma of the large spindle cell and giant cell type, with production of osteoid and cartilaginous tissue. It contained 2.1 units of phosphatase per gram. The serum phosphatase level fell to normal and showed no subsequent rise, but thirteen months after amputation a large, ill defined recurrence developed in the stump which necessitated disarticulation of the hip joint. The recurrent tumor was found to be of a histologic type similar to the original tumor and to contain 3 units of phosphatase per gram. This tissue had not been irradiated and so is listed in table 1. The patient is well three years after the second amputation.

This tumor was apparently one of those which forms moderate amounts of phosphatase but does not allow the enzyme to escape into the circulation until late in the course of the disease.

That there is no sharp line of demarcation between the tumors which allow phosphatase to enter the blood and those which do not is shown also by the following case:

CASE 4 (case 10 in table 2).—G. S., a youth aged 16, had a large bone-forming osteogenic sarcoma of the right femur (fig. 6). He received preoperative radiation totaling 4,600 roentgens tissue dose. His serum phosphatase level, which had been 9.2 units per hundred cubic centimeters initially, was essentially unchanged at 9.6 units at the close of treatment. These figures are considerably above the normal average for a youth of 16, but the patient, although over 6 feet tall, was immature in appearance, and his femoral epiphyses were still open. It therefore seemed possible that his general bodily growth might still be rapid enough to account for all the phosphatase in the serum. After amputation, however, the level of serum phosphatase dropped to 5 units per hundred cubic centimeters in ten days and to 3.2 units in two months. The level of phosphatase in the tumor was found to be high at 10.8 units per gram. It was evident that the excess phosphatase in the serum came from the tumor but that the amount reaching the circulation was small if one considered the large volume and high enzyme content of the tumorous tissue. The mineralization mechanism of the tumor appeared stable, being inactivated incompletely or not at all by a heavy dose of roentgen radiation, and this stability was reflected in the serum readings.

The next case is of especial interest because we were able to study the activity of various portions of the tumor by the use of radioactive phosphorus. This material [5] was present in solution as sodium phosphate. It has been shown by Lawrence and Scott,[6] Cook, Scott and Abelson [7] and others that such solutions are readily absorbed when given by mouth and that the phosphorus is deposited selectively in the bone.

CASE 5 (case 5 in table 2).—H. G., a boy aged 13 years, who was growing rapidly but was poorly nourished, had an osteogenic sarcoma originating in the lower part of the left femur and extending up the shaft. There was only a moderate amount of formation of new bone. The serum phosphatase level on admission was 16.5 units per hundred cubic centimeters, a moderately elevated reading for a boy of 13. Preoperative roentgen irradiation was given over a period of twenty-five days to two fields which together included the lower 20 cm. of the femur. The tissue dose at the center of the main tumor was 3,275 roentgens, and because of cross firing the dose at the periphery was approximately the same as at the center. The dose at the center of the upper portion of the femur was 4,100 roentgens. The serum phosphatase level fell during treatment to 7.2 units per hundred cubic centimeters, a normal value for an adolescent, but rose slightly to 10.3 units two weeks later. At this time a nodule suggestive of metastasis appeared in the lungs, but despite this a palliative amputation was decided on. The patient was given a tracer dose of 0.5 Gm. of radioactive phosphorus, and six days later disarticulation of the hip joint was performed. A week later the serum phosphatase was normal at 6.1 units per hundred cubic centimeters, showing that the elevated preoperative value was due to residual activity in the primary tumor rather than to the metastatic area in the lung.

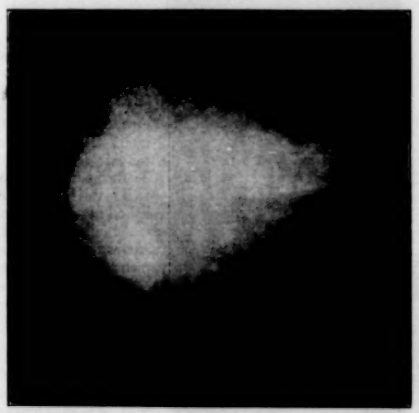

Fig. 5 (case 2).—Massive recurrence of tumor nine months after completion of roentgen therapy. Serum phosphatase 24.9 units per hundred cubic centimeters.

Determinations of phosphatase content and of radioactivity were made on different portions of the amputated specimen. The results are summarized in table 3.

It is seen that there is a close correspondence between the phosphatase and the radioactive phosphorus content of the different tissues. Both the theoretical and the practical implications of this relation are interesting. The phosphatase content of the tissue is an indication of its capacity to form bone; the amount of radioactive phosphorus deposited is a measure of the amount of bone actually laid down since the tagged phosphorus was available. In the present case, the two are closely proportional. It is to be expected that

5. This material was obtained through E. O. Lawrence, Ph.D., of the University of California.

6. Lawrence, J. H., and Scott, K. G.: Comparative Metabolism of Phosphorus in Normal and Lymphomatous Animals, Proc. Soc. Exper. Biol. & Med. 40: 694 (April) 1939.

7. Cook, S. F.; Scott, K. G., and Abelson, P.: The Deposition of Radiophosphorus in Tissues of Growing Chicks, Proc. Nat. Acad. Sc. 23: 528 (Sept.) 1937.

cases will be found in which the mineralization mechanism is active but in which, because of the presence of an inhibitor or other unfavorable condition, deposition of phosphorus does not take place. This possibility was discussed in relation to case 13. It is hoped that further work may clarify these relations. We have observed a fairly close correlation between the phosphatase and radioactive phosphorus contents of specimens of normal and pathologic bone from 3 other patients. Details will be published at a later date.

Fig. 6 (case 4).—Osteogenic sarcoma of left femur showing pronounced osteoplasia. Serum phosphatase 9.2 units per hundred cubic centimeters.

At first thought, radioactive phosphorus appears to offer little promise as a sole therapeutic agent in the treatment of a tumor as radioresistant as osteogenic sarcoma. Mr. Leo Marinelli of this hospital has made calculations which show that the most active portion of the tissue reported on here was receiving radiations from the isotope amounting to only 0.0015 equivalent roentgen per minute. We do not know the rate of deposition of the phosphorus, but if we assume that it is approximately the same as the rate of decay of radioactivity we find that in two weeks the tumor would have received a total dose of about 30 equivalent roentgens. Ten times as much radioactive phosphorus as was given to this patient may be administered safely, and many osteogenic sarcomas have a mineralization mechanism five times as active as this one was at the time of examination. Hence it is theoretically possible to obtain a total dose from radioactive phosphorus of the order of magnitude of at least 1,000 equivalent roentgens. This could probably not be relied on to inactivate the primary tumor, although it might be a useful adjuvant to external radiation therapy. More important is the probability that radioactive phosphorus may be effective in preventing metastases. There is much evidence to show that tumorous emboli before they are well established are more sensitive to all types of deleterious agents than are the primary tumors. No type of cancer metastasizes indiscriminately to all parts of the body, and some types show a marked predilection for a single organ, as osteogenic sarcoma does for the lung. It is difficult to escape the conclusion that the majority of tumorous emboli which enter the circulation die rather promptly, and only those which lodge in a favorable environment survive and grow. If this is so, and if the emboli from an osteogenic sarcoma show the same selective uptake of radioactive phosphorus that the primary tumor does, it is possible that presence of radioactive material in the malignant cells might weaken them enough to prevent their becoming established. We therefore plan to give prophylactic doses of radioactive phosphorus to patients with osteogenic sarcoma in an attempt to prevent metastases.

METASTATIC DISEASE OF BONE

As we have shown in table 1, the excess phosphatase in the serum of patients with primary bone tumors comes from the tumor, and when the source is removed or inactivated the serum phosphatase level falls to normal within one or two weeks. The situation is quite different when cancer originating in a soft part metastasizes to bone. In this condition phosphatase is ordinarily produced not by the invading tumor but as part of a defense or healing reaction in the adjacent bone. Invasion by some tumors, as carcinoma of the breast or thyroid, ordinarily elicits little defense in bone, causes slight changes in the serum phosphatase and produces osteolytic lesions. On the other hand, invasion by other types of malignant tissue, as carcinoma of the prostate, commonly causes an intense osteoplastic reaction with pronounced elevation of the serum phosphatase level.[3] The problem of why the response of the bone to invasion by different tissues varies so greatly in intensity is of importance in the understanding of the mechanism of metastasis and one which needs further study. It is evident, however, that irradiation of a metastatic lesion of bone may effect production of phosphatase directly by inactivating the defense mechanism or indirectly by inactivating the tumor which is eliciting the defense reaction. We have not observed changes indicating that irradiation ever stimulates the defense mechanism. When the tumor is inactivated by radiation therapy and the defense mechanism is relatively unaffected, the serum phosphatase level remains high until repair is well advanced. Therefore, serum phosphatase determinations are a reliable indication of the results of roentgen therapy of metastases to bone only when sufficient time has elapsed for healing to take place. In practice we find that if a patient with metastatic disease of the bone

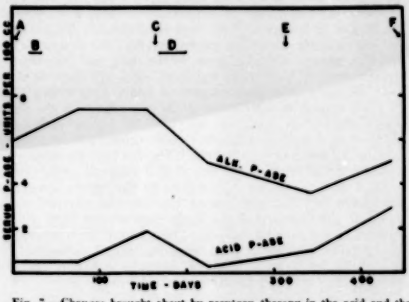

Fig. 7.—Changes brought about by roentgen therapy in the acid and the alkaline phosphatase of the serum of a patient with carcinoma of the prostate metastatic to bone.

accompanied by a high serum phosphatase level is treated and the serum phosphatase level fails to fall to normal within three months either the treatment has been inadequate or new lesions are developing.

In one type of metastatic disease, carcinoma of the prostate with involvement of bone, it is possible to

follow the activity of both the metastatic tumor and the surrounding bone by means of serum phosphatase determinations. The phosphatase of the bone has its maximum activity in alkaline solutions. Both normal and cancerous prostatic tissue contain a phosphatase which is active in acid solutions but almost completely inactive in the alkaline range. It has been shown by the Gutmans [8] and confirmed by one of us [9] that osseous tissue invaded by prostatic metastases contains both acid and alkaline phosphatases and that both enzymes escape readily into the circulation. The acid phosphatase from normal or from cancerous prostates which have not metastasized does not appear in the blood in significant amounts.

Case 6 illustrates the usefulness of determinations of both acid and alkaline phosphatase of the serum in the presence of carcinoma of the prostate metastatic to bone. The history is shown schematically in figure 7, in which the acid and the alkaline phosphatase of the serum are plotted against time and observation.

CASE 6.—W. S., a man aged 67, presented himself with a lesion of the ischium of mixed osteolytic and osteoplastic type. On aspiration biopsy at *A* (fig. 7), this was found to be metastatic carcinoma of undetermined origin. There was a history of a prostatectomy for benign hypertrophy at another hospital fifteen years previously, but there was no palpable disease in the prostate when the patient was first seen by us, and other systems presented no primary tumors. The alkaline serum phosphatase was slightly elevated at 6 units per hundred cubic centimeters, and the acid phosphatase was at the upper limit of normal at 0.56 unit. At *B*, the patient received roentgen therapy consisting of 1,800 roentgens (air) to each of two pelvic fields, with some symptomatic relief. There was no immediate change in blood chemistry, but four months later the level of the alkaline phosphatase of the serum had risen to 7.4 units and the acid phosphatase level to 1.9 units per hundred cubic centimeters, a definitely abnormal value. At about this time, a palpable nodule was discovered in the prostate. At *C*, this nodule was aspirated and carcinoma was obtained. At *D*, the patient received further treatment consisting of gold seeds in the prostate and a roentgen cycle totaling 2,250 roentgens (air) to each of six lateral pelvic fields and 1,750 roentgens to one perineal field. All symptoms were relieved, and one month after the close of treatment the alkaline phosphatase of the serum was found to have dropped to 5 units per hundred cubic centimeters and the acid phosphatase to 0.34 unit, both values being high normals. Unfortunately, no roentgenogram was made before the second cycle of irradiation, but a film made at *E* showed the lesion to be larger and more osteoplastic than at *A*. There is, of course, no way of knowing how much of this change took place before the therapy at *D*, but the drop in serum phosphatase makes it unlikely that the disease was active immediately after treatment. The alkaline phosphatase of the serum remained in the high range of normal for seven months, but the acid phosphatase soon showed a marked rise to four times the upper limit of normal. A film obtained at *F* showed that the disease was more widespread than at *E* and that in the new areas the pathologic process was predominantly osteolytic.

It appears from these figures that the first roentgen ray cycle had little effect on the activity of either the metastatic tumor or the defense reaction. The second cycle inactivated both processes markedly, but the effect on the defense reaction was more lasting than that on the tumor. This was shown both by the lag in the rise of the alkaline phosphatase of the serum behind that of the acid phosphatase and by the lack of conspicuous formation of bone in the new areas of involvement.

8. Gutman, A. B., and Gutman, Ethel B.: An "Acid" Phosphatase Occurring in the Serum of Patients with Metastasizing Carcinoma of the Prostate Gland, J. Clin. Investigation **17**: 473 (July) 1938.

9. Barringer, B. S., and Woodard, Helen Q.: Prostatic Carcinoma with Extensive Intraprostatic Calcification, Tr. Am. A. Genito-Urin. Surgeons **31**: 363, 1938.

SUMMARY

1. Examination of tissue from untreated neoplasms of bone shows that (*a*) benign osteochondromas and giant cell tumors produce little phosphatase; (*b*) some osteogenic sarcomas produce little phosphatase; (*c*) some osteogenic sarcomas produce abundant phosphatase which does not enter the circulation readily, and (*d*) some osteogenic sarcomas produce phosphatase which enters the circulation and can be measured in the serum. The phosphatase-producing mechanism of most of these tumors is inactivated by radiation therapy when the tissue dose equals or exceeds 4,000 roentgens. Smaller doses cause only irregular or incomplete inactivation.

2. In patients with osteogenic sarcoma having elevated serum phosphatase values, the changes in phosphatase afford a prompt indication of the effect of radiation therapy.

3. Radioactive phosphorus given by mouth localizes in the portions of tissue of osteogenic sarcoma which contain the most phosphatase.

4. Serum phosphatase determinations indicate the effectiveness of radiation therapy of metastatic tumors of bone only after sufficient time has elapsed for some healing to take place.

5. Determinations of the acid and alkaline phosphatase in the serum of patients with carcinoma of the prostate metastatic to bone make it possible to follow the activity of both the metastatic tumor and the regeneration of bone.

York Avenue and Sixty-Eighth Street.

CLINICAL TETANUS

TREATMENT IN 100 CONSECUTIVE CASES WITH A NET MORTALITY RATE OF 19 PER CENT

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AND
ALBERT G. BOWER, M.D.
LOS ANGELES

The death rate cited by various authors in cases of tetanus has usually varied from 50 to 70 per cent, or occasionally even higher. In a previous report [1] our experience indicated that regardless of age, sex, incubation period, site or type of injury and provided that each patient received an initial therapeutic dose of 100,000 units of antitoxin and a total dose under 200,000 units the death rate remained approximately 50 per cent. Paterson [2] reported a death rate of 27 per cent among 26 patients, all children, and the net mortality rate reported by Yodh,[3] whose method of therapy is similar to ours, was 29.4 per cent in a series of 438 patients. Net rates are those which are determined from the group of patients who survive for a period longer than twenty-four hours after first being seen by the therapist.

Therefore, any method of management which achieves a lower mortality rate may be worth reporting. No

† Dr. Vener died, May 23, 1940.

From the Communicable Disease Division of the Los Angeles County Hospital, the Bureau of Epidemiology of the Los Angeles City Health Department, and the University of Southern California School of Medicine.

1. Vener, H. I.; Bower, A. G., and McKillop, J. E.: Clinical Tetanus: A Study of One Hundred and Thirty-One Cases, California & West. Med. **39**: 6 (Dec.) 1933.

2. Paterson, A. E.: Tetanus: Its Diagnosis and Treatment, with Summary of Twenty-Six Consecutive Cases, M. J. Australia **1**: 832 (June 28) 1930.

3. Yodh, B. B.: Observations on the Treatment of Tetanus, Brit. M. J. **2**: 589 (Sept. 24) 1932; ibid. **1**: 855 (April 24) 1937.

hard and fast rules may be applied to management, but we believe that the general principles previously reported [4] and further exemplified in this report are of practical value. In our series of 100 patients, 29 deaths occurred, a gross fatality rate of 29 per cent. Twelve patients died within the first twenty-four hours of hospitalization, leaving 88 patients who survived longer than twenty-four hours. In the latter group 17 deaths occurred, a net mortality rate of 19.3 per cent.

TABLE 1.—*Tetanus: Mortality Rates by Age Groups and Sex*

Age Groups	Males			Females			Totals		
	Cases	Deaths	Case Fatality Rate, Percentage	Cases	Deaths	Case Fatality Rate, Percentage	Cases	Deaths	Case Fatality Rate, Percentage
Under 1	1	1	100.0	0	0	.....	1	1	100.0
1- 4	7	2	28.5	7	5	71.4	14	7	50.0
5- 9	21	3	14.3	8	1	12.5	29	4	13.8
10-14	15	1	6.6	1	0	.....	16	1	6.2
15-19	10	3	30.0	1	1	100.0	11	4	36.3
20-24	3	0	.....	0	0	.....	3	0	.....
25-29	3	2	66.6	2	1	50.0	5	3	60.0
30-34	2	0	.....	1	1	100.0	3	1	33.3
35-39	1	0	.....	1	0	.....	2	0	.....
40-44	1	1	100.0	1	1	100.0	2	2	100.0
45-49	2	0	.....	0	0	.....	2	0	.....
50-54	4	1	25.0	1	1	100.0	5	2	40.0
55-59	2	1	50.0	0	0	.....	2	1	50.0
60	3	1	33.3	2	2	100.0	5	3	60.0
Totals	75	16	21.3	25	13	52.0	100	29	29.0

FACTORS IN PROGNOSIS

Sex.—The total group comprised 75 males and 25 females. Among the males 16 deaths occurred, a mortality rate of 21.3 per cent; among the females 13 deaths occurred, a mortality rate of 52 per cent. Apparently some factors still have to be solved concerning the cause for this high rate among females. However, until the number of females treated is greater the results cannot be fairly interpreted.

Age.—The mortality rate for the various age groups is shown in table 1. The best results were obtained in the group of patients aged 10 to 14 years, with a mortality rate of 6.2 per cent, and the next best in the group of patients aged 5 to 9 years, with a rate of 13.8 per cent. No material change has been achieved in the mortality rates of children under 5 years and adults over 40. It is the exception to have a patient over the age of 60 survive.

Incubation Period.—This factor plays an important part in the prognosis. Under our method of management a patient with an incubation period of six days or longer has approximately a 75 to 80 per cent chance of recovery (table 2), in contrast to a 23 per cent chance when the period is under six days. It is likely that if data on some of the cases grouped under "unknown" could be obtained the foregoing rates would be altered.

Dose of Antitoxin.—The prime object in the management of tetanus is to administer a minimum dose of 200,000 units of antitoxin in a definite period of twenty-four to thirty-six hours. Thereafter we refrain from disturbing the patient for a period of ten days to two weeks, except for giving 1,500 units every four days in order to maintain desensitization until complete recovery or death ensues. In 72 instances in which patients received 200,000 or more units of antitoxin (none receiving more than 230,000) only 7 deaths occurred, the mortality rate being 9.7 per cent (table 3). After this dose no additional large doses of serum are administered unless they are absolutely indicated or the case is exceptional.

Approximately 50 per cent of the patients were admitted with a history of symptoms for three days or longer and frequently in severe convulsions.

ACTIVE MANAGEMENT

Each patient with tetanus represents a surgical emergency. Regardless of the mildness of symptoms, immediate action is taken. For the sake of brevity and to avoid confusion we choose a hypothetic case and follow its schematic management during the first thirty-six to forty-eight hours of hospitalization. Unless otherwise specified, the time intervals are usually the ones followed, but the naming of the hours is for clarity only.

1. *Preliminary Procedures.*—Patient is admitted to diagnostic ward, at 9 a. m. The history is obtained, a physical examination is performed with a minimum of disturbance to the patient, the focus of infection is found, if possible, and a serum test is done on the skin for sensitivity.

2. *Sedation.*—At 9:30 a. m. chloral hydrate, 10 to 30 grains (0.65 to 2 Gm.), depending on the size and age of the patient, is given orally. If the patient is unable to swallow, the drug is given in combination with the same amount of calcium bromide by retention enema. Deep narcosis must be avoided, as it frequently results in various adverse metabolic changes. Occasionally the dose cited may have to be repeated, or else supplemented with 3 to 5 grains (0.2 to 0.32 Gm.) of soluble phenobarbital given intravenously. If possible, about one hour should elapse before other treatment is begun.

3. *Local Treatment of Wound.*—At 11 a. m. 20,000 units of antitoxin is injected completely around the lesion. Frequently, if the location of the wound permits, the dose of antitoxin is preceded by local infiltration with procaine hydrochloride. After a pause of forty-five to sixty minutes the focus is incised widely or excised thoroughly, whichever procedure is applicable. Care is used to keep the excision within the area encircled by the antitoxin. All foreign material must be eradicated, regardless of how innocent the lesion may appear. The area is treated subsequently as though infected, and hot compresses of potassium permanganate are

TABLE 2.—*Tetanus: Mortality Rates by Sex and Incubation Periods*

Incubation Period, Days	Males			Females			Totals		
	Cases	Deaths	Case Fatality Rate, Percentage	Cases	Deaths	Case Fatality Rate, Percentage	Cases	Deaths	Case Fatality Rate, Percentage
Less than 3	0	0	....	0	0	....	0	0	....
3	2	1	50.0	0	0	....	2	1	50.0
4	0	0	....	2	2	100.0	2	2	100.0
5	5	4	80.0	4	3	75.0	9	7	77.7
6	8	1	12.5	2	2	100.0	10	3	30.0
7	7	1	14.2	4	1	25.0	11	2	18.1
8	4	1	25.0	1	0	....	5	1	20.0
9	5	1	20.0	0	0	....	5	1	20.0
10	7	3	42.8	1	0	....	8	3	37.5
11	3	1	33.3	1	0	....	4	1	25.0
12	2	0	....	1	0	....	3	0	....
13	0	0	....	0	0	....	0	0	....
14	2	0	....	0	0	....	2	0	....
15	6	0	....	2	0	....	8	0	....
Unknown	24	3	12.5	7	5	71.4	31	8	25.8
Totals	75	16	21.3	25	13	52.0	100	29	29.0

4. Vener, H. I.: Treatment of Tetanus: Preliminary Report, California & West. Med. 48:13 (March) 1938.

applied. In some instances, if a finger or toe is involved in the focus, the digit is amputated. Here individual judgment applies.

4. *Medication.*—Intramuscular Injection of Antitoxin: Before any surgical intervention 60,000 units of antitoxin is injected deep intramuscularly, girdling the extremity of the part involved; when possible, the injection is made at the junction of the upper and middle thirds of the infected part's proximal portion. This procedure may serve as a possible barrier to the progress of toxin along the course of the nerve trunks.

Cisternal Therapy: At 2 p. m., if sedation is sufficient, cisternal therapy presents no difficulty in our experience; if it is insufficient, further sedation may be given by methods previously indicated. The occipital area is shaved, and under aseptic technic cisternal puncture is done; about 10 cc. of fluid is removed and 20,000 units of antitoxin previously warmed to body temperature is injected slowly by gravity. Following this, the rectal temperature may become elevated to 102 to 106 F. within a few hours, but this usually subsides within eight to ten hours. Hourly readings are made, and when the rectal temperature has receded to about 102 F., the next step is performed.

Initial Intravenous Injection of Antitoxin: At 10 p. m. 40,000 units of antitoxin diluted in 300 to 500 cc. of physiologic solution of sodium chloride is administered, regardless of the age or size of the patient. The flow is by gravity and is slow, at least one hour being allowed for completion. Precautions against anaphylactic shock are observed. Five to six minutes preceding this intravenous injection 5 minims (0.31 cc.) of epinephrine is given hypodermically, the dose to be repeated midway in and at the completion of the procedure. An additional precaution against serum sensitivity is the blood pressure test. The blood pressure is taken, and 0.1 cc. of the serum diluted with 9.9 cc. of physiologic solution of sodium chloride is administered intravenously. Blood pressure readings are recorded at five minute intervals, and if the systolic pressure has not dropped more than 20 points at the end of twenty minutes the patient is not particularly sensitive. Experience has demonstrated that serum reactions occur less frequently if the antitoxin is kept at room temperature for twenty-four hours prior to its use and warmed in a lukewarm water bath for twenty to thirty minutes immediately before use.

Methenamine Given Intravenously: At 1 a. m., two hours after the intravenous injection of antitoxin, 15 grains (1 Gm.) of methenamine is given intravenously. This drug constitutes an integral part of the management. Among the theoretical reasons for the use of methenamine are the following: (*a*) alteration of the choroid plexus, allowing greater permeability to the antitoxin; (*b*) antisepsis by the liberation of formic acid in the blood stream; (*c*) phylaxis by altering the colloids in the nerve cells and (*d*) some unexplained direct action on the tetanus toxin. We believe that the first possibility is the most probable.

Second Intravenous Injection of Antitoxin: At 2 a. m., one hour after the injection of methenamine, if no reaction has ensued from the first intravenous use of antitoxin, 20,000 additional units is administered by vein in 300 to 500 cc. of physiologic solution of sodium chloride (as in procedure 6), all the precautions previously described being observed. If a febrile reaction follows the first intravenous dose of antitoxin, the second intravenous dose is held in temporary abeyance. If anaphylaxis, a severe chill or any other untoward reaction occurs the second intravenous dose of antitoxin is not given.

Intramuscular Injection of Antitoxin: Approximately twelve hours after the second intravenous dose

TABLE 3.—*Tetanus: Dosage and Deaths, Showing Distribution by Sex*

Dosage, Units in Thousands	Males			Females			Totals		
	Cases	Deaths	Case Fatality Rate, Percentage	Cases	Deaths	Case Fatality Rate, Percentage	Cases	Deaths	Case Fatality Rate, Percentage
20	2	2	100.0	0	0	.....	2	2	100.0
40	1	1	100.0	0	0	.....	1	1	100.0
60	0	0	.....	1	1	100.0	1	1	100.0
80	0	0	.....	1	1	100.0	1	1	100.0
100	2	2	100.0	2	2	100.0	4	4	100.0
120	1	1	100.0	0	0	.....	1	1	100.0
140	2	2	100.0	1	1	100.0	3	3	100.0
160	6	2	33.3	2	2	100.0	8	4	50.0
180	4	3	75.0	3	2	66.6	7	5	71.4
200	39	2	5.1	11	3	27.2	50	5	10.0
220	12	1	8.3	2	0	.....	14	1	7.1
230	6	0	0	2	1	50.0	8	1	12.5
Totals	75	16	21.3	25	13	52.0	100	29	29.0

the final 40,000 units of antitoxin is injected deep intramuscularly (as described under Intramuscular Injection of Antitoxin) just proximal to the previous site of injection. When for any reason the second intravenous dose of antitoxin is omitted the final intramuscular dose is increased to 60,000 units.

Methenamine: Fifteen grains (1 Gm.) of the drug is given intravenously as before, ten to twelve hours after each intramuscular injection of antitoxin.

Subsequent Antitoxin: A total dose of 200,000 units of antitoxin has now been administered within thirty to thirty-six hours after admission. Additional large doses are not given unless the patient has a relapse. (No patient in our series received more than 230,000 units.) The progress of the patient is observed and general bedside nursing care continued. The ordinary prophylactic dose of 1,500 units of antitoxin is given subcutaneously at four or five day intervals for four doses, to keep the patient desensitized. If the possibility of future orthopedic or other surgical measures exist these desensitizing doses are continued for a period of two weeks after the surgical intervention. If this precaution is not observed relapses do occur.

If a patient is especially sensitive to horse serum or subject to some type of allergy, or previously has received prophylactic antitoxin followed by a subsequent serum reaction and tetanus, the cisternal and intravenous procedures are omitted. In this event all antitoxin is divided into two intramuscular injections of 100,000 units each, given at twelve to eighteen hour intervals and followed by methenamine as previously described.

SUMMARY OF ACTIVE THERAPY

Active therapy consists of (1) preliminary procedures; (2) sedation, of adequate nature; (3) local treatment of wound; (4) antitoxin therapy: (*a*) locally 20,000 units, (*b*) intramuscularly 60,000 units, (*c*) cisternally 20,000 units, (*d*) intravenously 40,000 units in physiologic solution of sodium chloride; dose is repeated in three hours with 20,000 units if no reaction has ensued, (*e*) intramuscularly 40,000 units proximal to previous site of injection, to make a total dose of 200,000 units given within a period of thirty to thirty-six hours after hospitalization, and (5) methen-

amine, 15 grains (1 Gm.), given intravenously two hours after the first intravenous dose of 40,000 units of serum and ten to twelve hours after each of the large intramuscular doses of antitoxin.

GENERAL BEDSIDE MANAGEMENT

Fluids.—The patient is given all the fluids orally that can be tolerated without causing severe convulsions. If he is unable to swallow, dextrose, saline solution or a combination of dextrose and saline may be given intravenously. Hypodermoclysis is not well tolerated and causes restlessness. In the average case a maximum of 1,500 cc. daily suffices. Excessive use of fluids may induce pulmonary edema, hypostatic pneumonia or cardiac dilatation. After the first few days, with some assistance the average patient is able to swallow fluids.

Oral Hygiene.—Strict asepsis must be observed; otherwise aspiration pneumonia may result. Proper oral hygiene may be maintained by gentle suction or frequent gentle cleansing of the mouth and nasal passages.

Posture.—To avoid pulmonary complications, frequent changes in position are essential. The dorsal posture must be avoided as much as possible, but resting on either side or on the abdomen results in adequate rest for the patient.

Sinusitis.—Excessive sedation and poor oral and nasal hygiene associated with rapid shallow respirations tend to produce sinusitis and secondary aspiration pneumonia. These may be avoided by postural drainage (by moderate elevation of the foot of the bed) and by adequate shrinkage of the mucous membrane of the nose at frequent intervals.

Pneumonia.—This is the most frequent complication and when it occurs usually terminates in death. Typing for pneumococcus and the use of sulfanilamide or its derivatives have been of help on a few occasions.

Serum Sickness and Urticaria.—These occur frequently between the fifth and tenth days. Drugs used for these complications have been ephedrine, acetylsalicylic acid, calcium bromide, calcium gluconate and compound calamine lotion. Tincture of apis, 5 to 15 minims (0.3 to 0.9 cc.) four times daily, has frequently been of distinct value. We have had no experience with histaminase. Despite the advancement made in recent years in refining antitoxin, serum sickness developed in approximately 39 per cent of these patients. Within the past year, however, samples of serum furnished by several biologic firms for clinical trial have produced relatively little serum reaction or sickness.

Sedation.—In the average case, chloral hydrate, singly or in combination with sodium or calcium bromide (10 to 40 grains [0.65 to 2.6 Gm.] of each, depending on the age and size of the patient) is administered by retention enemas at two to four hour intervals. If major convulsions continue, soluble phenobarbital may be given intravenously in addition. Wild seizures or spasms are not an indication for excessive sedation. Opiates are distinctly avoided, excepting occasionally for pain after major surgical intervention. If convulsions continue to occur, paraldehyde by retention enema may be given. General inhalation anesthesia is not advised for patients with convulsions. If convulsions continue in spite of apparently adequate control measures, the prognosis is unfavorable. For general anesthesia, when amputation of digits or short surgical procedures are to be done, pentothal sodium is given intravenously under the guidance of a competent anesthetist. For any major surgical intervention inhalation anesthesia is used.

Spasticity.—Following the total amount of antitoxin given the patient within the first thirty-six hours of hospitalization, the trismus and the muscular rigidity of the muscles of the neck, back and abdomen persist for some time. The general condition, however, remains good. The average hospital stay of a patient with uncomplicated tetanus is about three weeks.

The Heart.—Death in tetanus is not due to cardiac complication but usually to respiratory failure during a convulsion. The last 15 patients who had electrocardiographic tracings taken within a few days after hospitalization revealed only axis deviation, sinus arrhythmia and tachycardia.

Compression Fractures of the Vertebrae.—In the last 9 cases in our study, two instances of fracture of the dorsal vertebrae were observed. One patient had a compression fracture of the sixth vertebra, and the other had involvement of the fourth, fifth, sixth, seventh and eighth; both patients made uneventful recoveries. Roentgenograms of the dorsal vertebrae are now taken of all patients prior to dismissal from the hospital.

Other Complications.—Encountered at times are abscesses, generalized furunculosis, mastoiditis with lateral sinus thrombosis, hemorrhagic nephritis, septicemia, uremia, pulmonary edema and lung abscess.

Diet.—Liquids usually suffice during the first week of management. The fluid diet is generally changed gradually to a semisoft or soft diet by the end of the second week.

Quiet.—The patient should be kept in a quiet, semidark room. A special effort should be made to avoid squeaky beds and doors, noisy elevators, bedside conversations, unnecessary examinations and hospital repairs in the vicinity of the patient's room. These annoyances cause convulsions, are extremely harmful and must be reduced to a minimum. Cotton or plastic antinoise ear stoppers fitted into the auditory canals are of distinct value in decreasing extrinsic noises.

Nursing Management.—Next in importance to antitoxin is good general nursing care. Common sense and a knowledge of the difficulties to be encountered must be appreciated by all nurses on the case. All unnecessary fussing with the patient must be avoided. Any hospital admitting many patients with tetanus during the year would do well to have nurses who have been trained in the management of the disease available for duty when the occasion demands it. Cessation of respiration is not an indication for signing a patient's death certificate, for with competent medical and nursing management and immediate measures for resuscitation patients have revived and completely recovered.

CONCLUSIONS

1. The treatment of 100 consecutive patients with tetanus in an identical manner resulted in a reduction of our gross mortality rate of 56.5 per cent in past years to a current rate of 29 per cent. If the patients dying during the first twenty-four hours of hospitalization are excluded, the series presents a net mortality rate of 19.3 per cent among 88 patients.

2. Despite the reduction in the mortality rate in the entire group, no material alteration was obtained among the 25 females, their rate remaining approximately 50 per cent, in contrast to the 21.3 per cent among the 75 males.

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3. Our best results were obtained among children between the ages of 10 and 14 years, with a mortality rate of 6.2 per cent; the next best results were achieved among children between 5 and 9 years, with a rate of 13.8 per cent. The general mortality rate of 50 per cent was not materially affected in patients under the age of 4 years or over the age of 40.

4. A patient with an incubation period of six days or longer under this method of management has a 75 to 80 per cent chance of recovery, in contrast to the 50 per cent chance of those patients having a shorter incubation period.

5. The objective to be attained in management is to administer 200,000 units of antitoxin by various routes within thirty to thirty-six hours after hospitalization, regardless of all other factors, as in the hypothetical case of tetanus described.

6. Next to antitoxin therapy, practical bedside management of the disease and its commoner complications, under proper medical and nursing direction, is most important, and preferably nurses skilled in the care of patients with tetanus should be employed.

7. The results herein cited in our opinion warrant further trial to ascertain the ultimate value of the plan. Further studies are being conducted in additional groups of patients and will furnish a supplemental report.

GIARDIA LAMBLIA INFECTION IN MAN

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Leeuwenhoek in 1675, in examining his own stool, saw and described the protozoan now known as Giardia lamblia.[1] In 1859 Lambl described it under the name Cercomonas intestinalis. Stiles in 1915 placed it in the genus Giardia, calling it Giardia lamblia.

The incidence of infection with Giardia lamblia varies markedly with the geographic location. It is much more frequently encountered in tropical and subtropical climates than in the temperate zone. Incidence in the United States has been found by Hegner, Root, Augustine and Huff[2] to average 12 per cent. In examinations of the stools of 1,539 selected patients and food handlers in the University of Chicago Clinics, this parasite was found in twenty-three instances (1.5 per cent). This incidence is considerably lower than that usually found in the North Temperate Zone. A probable explanation of this finding may be found in the fact that a higher income level with the concomitant better hygienic living conditions prevails in the group studied. Of the 23 subjects 16 were men and 7 women. A predominance of the disease in men has been observed by other workers. The parasite was encountered more frequently in younger persons. Ages varied from 20 to 56 years, with an average of 30 and a median of 26. There was no opportunity to include children, in whom Véghelyi[3] has found the infection to be attended by more severe symptoms, because the lower age limit of the clinic is 15 years. Six patients harbored other parasites besides Giardia, as is shown in table 1.

Salmonella paratyphi (Bacillus paratyphosus A) was present in the stools of 1 patient. No other significant organisms were found in routine bacterial culture of the stools of the remaining patients, and the serum titer of agglutinins against the intestinal pathogens was within normal range. The length of time that the patients were known to have harbored Giardia lamblia varied from five years to a few weeks.

Opportunity was afforded us to study 14 of the patients in detail. It was impossible to follow 9 in the manner we desired, although 5 of these, who were treated with atabrine, were known to have improved clinically and the organisms disappeared from their stools.

The pathogenicity of lamblia has been the center of considerable controversy for some time. One of the difficulties in evaluating the pathologic significance of this parasite lay in the fact that there was no certain means of eradicating it, as has been noted by Miles and Culbertson.[4] With the introduction of atabrine therapy for giardiasis by Galli-Valerio[5] this difficulty was overcome. Numerous European workers have been able to confirm the efficacy of this drug as a lambliacide. In the United States, Morrison and Swalm[6] have reported good results in 9 out of 10 cases.

A careful study of the 14 patients before and after the administration of atabrine dihydrochloride was made for the purpose of evaluating the efficacy of the drug and the pathogenicity of the organism. In addition to a detailed history of the onset and course of the patient's illness, the usual physical examination and laboratory analyses were made. Studies of the duodenal content removed by duodenal drainage were carried out in each case, and gastroscopic examinations were made in 10 cases. After the course of atabrine therapy had been completed, each patient was interviewed and stools were examined at intervals for at least eight weeks and in some instances as long as five months.

The symptoms or complaints of patients infected with Giardia were, in order of frequency, diarrhea, fatigue and weakness, abdominal pain with flatus, blood in the stools, insomnia, dizziness, nervousness and loss of weight.

The blood of all the patients was found to be normal except for 1 patient with pernicious anemia. This person, as well as one other with unexplained splenomegaly, had achlorhydria proved by a histamine test. Routine examination of the urine showed nothing abnormal. Blood was found in the stools of 4 patients by the benzidine technic but could be explained by coexisting disorders such as hemorrhoids and regional enteritis. Wenyon[7] found that "blood never occurs in pure Giardia infections." Although some authors, notably MacPhee and Walker[8] have expressed the

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This work was done under a grant from the Douglas Smith Foundation for Medical Research of the University of Chicago.

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7. Wenyon, C. M.: Protozoology, New York, William Wood & Company, 1926, p. 704.
8. MacPhee, Lee, and Walker, B. S.: Intestinal Giardiasis in New England, Am. J. Digest. Dis. & Nutrition **1**: 768-772 (Jan.) 1935.

belief that severe biliary symptoms are associated with giardiasis, gallbladder disease did not seem to play a part in any of our cases. Cholecystograms were not taken as a routine, but visualization of the gallbladder of patients who were examined with roentgen rays was normal.

TABLE 1.—*Incidence of Parasites Other Than Giardia Lamblia in Six Patients*

Cysts of Endamoeba histolytica, Endamoeba coli, Endolimax nana, and Trichomonas hominis	1
Cysts of Endamoeba coli	2
Cysts of Endamoeba histolytica	2
Trichomonas hominis	1
	6

tions to the drug, although some patients complained of more frequent stools during the first day or two of medication.

The important change after therapy was cessation of the diarrhea. In some instances there was an increased feeling of well-being.

Atabrine therapy was effective in freeing all patients treated of their infection. A second course of treatment was required in only 1 case. In 4 cases, in which daily stools were examined during the course of treatment, the Giardia cysts had disappeared by the third day. Patients found infected with other parasites besides Giardia were not freed of them with the atabrine dihydrochloride.

COMMENT

There seems to us little reason to doubt that Giardia lamblia can cause diarrhea. However, in those cases in which the infection was known to have been of long duration the diarrhea was intermittent and not persistent. Atabrine dihydrochloride is highly effective in eradicating the parasite. The toxic effect of the drug is slight. Consequently the routine treatment of giardiasis with atabrine dihydrochloride is in order. However, there is no evidence that Giardia lamblia is able to invade tissue. In some cases, vague abdominal symptoms persist after therapy, thus suggesting that the initial symptoms may not have been due to the infection with Giardia lamblia.

TABLE 2.—*Effectiveness of Atabrine Therapy and Pathogenicity of Giardia Lamblia in Fourteen Patients*

Patient	Age	Sex	Period Observed	Symptoms	Free Hydrochloric Acid	Gastroscopic Examination	Stools		Duodenal Drainage	
							Before	After	Before	After
S. H.*	31	♀	1935-1940	Diarrhea intermittent (pernicious anemia)	0	Atrophic gastritis of entire stomach	Positive	Negative	Positive	Not done
D. W.	25	♀	1939-1940	Alternating diarrhea, weight loss and weakness	117	Normal	Positive	Negative	Positive	Negative
J. K.	20	♂	1939-1940	Diarrhea; insomnia, weakness	142	Normal	Positive	Negative	Positive	Not done
L. R.	28	♂	1939-1940	Loose stools, gastric distress and fatigue	73	Normal	Positive	Negative	Positive	Negative
V. B.	38	♂	1938-1940	Loss of weight, diarrhea, fatigue, dizziness	95	Mild hypertrophic gastritis	Positive	Negative	Negative	Not done
J. B.	21	♂	1939-1940	Diarrhea alternating with constipation, rumbling and gurgling	100	Normal	Negative†	Negative	Negative	Not done
J. P.	52	♂	1938-1940	Pain in left side; dull gastric pains	114	Normal	Positive	Negative	Positive	Not done
G. N.	36	♂	3/22/40-4/16/40	Alternating diarrhea with constipation	117	Small area of hypertrophic gastritis	Positive	Negative	Positive	Negative
G. S.‡	22	♂	12/9/39-2/1/40	Diarrhea with hemorrhage from bowel	Not done	Not done	Positive	Negative	Positive	Not done
A. G.	35	♂	1938-1940	Diarrhea with gas and bloating	88	Normal	Positive	Negative	Positive	Not done
M. T.	56	♀	1939-1940	Diarrhea, weakness, jaundice (splenomegaly)	0	Hypertrophic gastritis	Positive	Negative	Positive	Not done
H. H.	26	♂	1940	Diarrhea, weight loss, abdominal cramps	74	Not done	Positive	Negative	Positive	Not done
L. P.	25	♂	1940	Abdominal cramps; sudden onset of diarrhea 3 yr. ago	(Ewald) 4	Not done	Positive	Negative	Positive	Negative
J. R.	25	♀	1940	Nervousness	Not done	Not done	Positive	Negative	Positive	Not done

* Second course of atabrine therapy was required to obtain negative stools.
† Stools became negative for Giardia before atabrine dihydrochloride was given and diarrhea stopped.
‡ Patient had exploratory laparotomy which revealed possible regional enteritis.

Duodenal drainage was done by the Lyon technic and the tip of the tube checked by fluoroscopy for its whereabouts in the small intestine. Samples were taken at various levels and showed the vegetative forms of Giardia in all but 2 cases. The parasite was usually found in the ascending limb of the duodenum. In the cases in which the vegetative forms could not be found after repeated drainage, the parasites were probably harbored elsewhere in the intestine. The microscopic appearance of the contents of the duodenum was normal in most instances, although occasionally there was excessive exfoliation of mucosal cells. Duodenal drainage after the administration of atabrine dihydrochloride did not reveal the vegetative form in a single case. Schindler [9] described the presence of gastritis associated with giardiasis. Only 4 of 10 patients showed gastritis, 1 atrophic (pernicious anemia) and 3 hypertrophic.

The treatment consisted of administering 0.1 Gm. (1½ grains) of atabrine dihydrochloride orally three times a day for five days. There were no severe reac-

9. Schindler, Rudolph: Gastroscopy, Chicago, University of Chicago Press, 1937, p. 189.

CONCLUSIONS

1. Infection with Giardia lamblia is often encountered in patients with moderate or intermittent diarrhea, with mild digestive symptoms and without the presence of occult blood in the feces.

2. The symptoms often, but not invariably, disappear after the eradication of the parasite. In our limited experience, the diarrhea invariably disappeared.

3. Atabrine dihydrochloride is a highly satisfactory drug for the treatment of giardiasis.

TORULA MENINGOENCEPHALITIS

REPORT OF A CASE; OBSERVATION OF THE CEREBROSPINAL FLUID

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Instances of proved torulosis are rare. In Johns and Attaway's summary,[1] published in 1933, 46 cases of torulosis were described of which only 31 had occurred in the United States. In discussing Cabot's case [2] Mallory stated in 1934 that he had seen an unpublished manuscript in which approximately 80 cases of torulosis were mentioned. Since then about 15 additional cases have been reported. The diagnosis was established before death in only about half of these cases, but the disease was not even suspected in a considerable number until an examination of microscopic sections had revealed the true nature of the condition.

The case which is the subject of our report was somewhat unusual because of the fact that the etiologic agent was demonstrated early in the course of illness and because of the relative acuteness of the disease. Only three other reported instances of torulosis have been of less than a month's duration.[3]

REPORT OF CASE

History.—W. E., a man aged 63, a manufacturer of leather goods, complained of fatigue on Oct. 3, 1938. Two days later, headache and anorexia confined him to bed. On October 6 icterus was noted; the temperature rose to 100 F. (37.8 C.) and vomiting ensued. Because these symptoms became more severe, the patient was admitted to the Syracuse Memorial Hospital on October 8.

Prior to the present illness the patient had been in good health. An appendectomy had been performed during 1935, and an atypical attack of pneumonia had occurred during January 1938. Weight had been about stationary at 160 pounds (73 Kg.). In 1936 a medical study had brought no abnormalities to light. About ten days before the onset of the present illness the patient had been caught in a hurricane and had undergone great physical exertion.

Examination.—On admission to the hospital the patient was well developed and well nourished, weak and apprehensive but mentally alert and cooperative. The temperature was 101 F. (38.3 C.) and the pulse rate was 64 beats a minute. The blood pressure was 136 mm. of mercury systolic and 70 mm. diastolic. The skin and scleras were icteric. The pupils were round, regular, equal and active to light and during accommodation. There were no ocular palsies. The margins of the disks were slightly blurred. The breath was foul and the tongue was dry and coated. The neck was supple. The heart sounds were rather faint but were not otherwise abnormal. The liver, which was palpable at the costal margin, was smooth and not tender. The reflexes were equal and normally active. The examination of the blood showed 4,600,000 erythrocytes per cubic millimeter and a content of hemoglobin which was 75 per cent of normal by the Sahli method. The count of leukocytes showed 14,400 per cubic millimeter, of which 88 per cent were polymorphonuclear leukocytes. The icterus index was 15 units. The blood Wassermann reaction was negative. The urine contained a little albumin and occasional coarsely granular casts but no bile.

The most probable diagnosis seemed to be obstructive jaundice.

Clinical Course.—After rest in bed the patient was able to take fair amounts of fluid and some food by mouth, the vomiting stopped and the jaundice lessened. Although the patient was definitely improved, he was greatly depressed and seemed to be slightly confused. Some rigidity of the neck was noted at times; on other occasions this finding was absent. The level of the temperature rose slowly, but the pulse rate remained between 60 and 80. Because of these clinical developments and the history of the patient's having been caught in a hurricane, typhoid was considered. However, consistently negative cultures of the blood, urine and feces, negative reactions to the Widal agglutination test and subsequent observations ruled out this consideration.

Although the general condition had changed but little, lethargy was definite by October 14. While headache and photophobia had decreased, nuchal rigidity had increased. There was still no involvement of the cranial nerves, but the abdominal reflexes could no longer be elicited. The right knee jerk was sluggish; the left was not obtained. Kernig's sign was questionably present in each leg, but there was no ankle clonus. Babinski's reflex was not present. The results of additional laboratory studies were as follows: icterus index 7 units, red blood cells 4,300,000, hemoglobin 85 per cent and white blood cells 9,300, of which 78 per cent were polymorphonuclear leukocytes. The blood sugar and nonprotein nitrogen per hundred cubic centimeters of blood were respectively 125 mg. and 29 mg. A streptococcus of the gamma type and Bacillus proteus were cultured from the urine. The condition now suggested encephalitis and a lumbar puncture was done revealing an increased pressure in the cerebrospinal fluid. The fluid was clear, with a normal content of protein and sugar, but there was a slight pleocytosis.

Almost daily lumbar punctures were performed during the remaining two weeks of the patient's life. The cerebrospinal fluid was clear except for the final sample. The pressure was 450 mm. of water at first, but later it fell to 25 mm. as a result of the repeated drainage. There were between 18 and 68 cells per cubic millimeter, except for the final sample, in which the number was 192. The cells were all lymphocytes except in the last sample, in which 39 per cent were polymorphonuclear cells. Five determinations of sugar yielded values which varied between 43 and 59 mg. per hundred cubic centimeters. Two determinations of globulin fell within normal limits, and a single determination of chloride was 745 mg. per hundred cubic centimeters. The Wassermann reaction of the cerebrospinal fluid was negative; the gold curve was 0001000000. Cultures of the cerebrospinal fluid yielded a yeastlike organism which was identified as Torula histolytica. Numerous organisms were seen microscopically in the last three specimens of spinal fluid. Reexamination of earlier smears of the fluid also showed occasional organisms. These had been mistakenly identified as lymphocytes. Reexamination of the blood cultures, furthermore, also showed a sparse growth of Torula histolytica on a single blood agar plate.

The further course was characterized by a continuously elevated temperature, which ranged between 100 and 102 F. (37.8 and 38.9 C.), and a pulse rate which varied between 90 and 100. Lethargy continued, but at times the patient could be aroused sufficiently to talk to his attendants and to take an interest in his surroundings. On October 15 a twitching of the upper lip was noted; three days later difficulty in swallowing began. It became necessary to feed the patient by means of a tube. By October 21 he could neither speak nor swallow. Flaccidity and weakness of the left arm were noted, as were hyperactivity of the left ankle jerk, a positive Babinski reflex and ankle clonus. Frequent lumbar punctures gave only temporary relief. On October 26 a sudden redness and swelling of the left eye developed. Motion was promptly lost, and the eyeball became abnormally prominent. The fundus was edematous and the veins were engorged. On October 28 as a

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1. Johns, F. M., and Attaway, C. L.: Torula Meningitis: Report of Cases and Summary of Literature, Am. J. Clin. Path. 3:459 (Nov.) 1933.

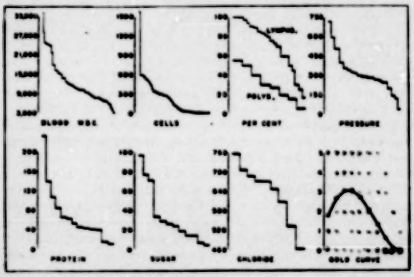
2. Torula Meningitis: Lymphoblastoma, Hodgkin's Type [Cabot Case 20241], New England J. Med. 210:1291 (June 14) 1934.

3. Levin, E. A.: Torula Infection of the Central Nervous System, Arch. Int. Med. 59:667 (April) 1937.

last resort, sulfanilamide was administered. Two doses of 0.16 Gm. were given intraspinally at twenty-four hour intervals, and 6 Gm. was given once subcutaneously. Torula histolytica was still present in the last sample of spinal fluid, which was obtained about five hours before death. Death occurred on the twenty-fifth day after the appearance of symptoms. The temperature rose terminally to 105.2 F. (40.7 C.), and the pulse rate reached 144.

Postmortem Examination.—A necropsy was performed six hours after death. The left eye was red and swollen. The gallbladder was moderately distended and contained several concretions. A few old fibrous adhesions were seen over the left upper lobe and scattered areas of fibrinous exudate over the surfaces of both left lobes. There were scattered, small abscesses in both lungs which were thought to be of several weeks' duration.

When the calvarium was removed, numerous prominent areas of arachnoidal granulation were noted. The superior sagittal sinus was filled with a fairly fresh blood clot, but there was no evidence of antemortem thrombosis. A thin, grayish exudate was present over the pia-arachnoid, especially on the left side in the frontotemporal region. When the brain was removed, a speckled, hemorrhagic area of the dura was seen which was adherent to the inner cranial surface of the frontal bone and to the wall of the orbit on the left side. The cavernous sinuses were filled with a reddish gray clot which resembled an infected thrombus. The gross examination was not otherwise remarkable.



Observations made on the spinal fluid and counts of leukocytes in the blood, from cases of torulosis reported in the literature.

The positive observations on microscopic examination were as follows: The lungs showed acute bronchitis and bronchopneumonia, with small abscesses. A hemorrhagic area, possibly an infarction, was present. No yeastlike organisms were found. In the liver a few areas of acute inflammation, usually about the portal veins, were seen. The kidneys showed a mild degree of tubular degeneration but no inflammatory reaction. The adrenals were focally infiltrated with lymphocytes, plasma cells and a few eosinophils. The aorta showed some arteriosclerosis, with areas of calcification. The most interesting changes concerned the central nervous system. There was extensive acute meningitis. Sections from the cortex and midbrain, including the basal ganglions, showed definite perivascular inflammation, with edema and thrombosis of some of the small vessels. There were areas of degeneration in the midbrain, with a considerable infiltration of large mononuclear phagocytes. Numerous small yeastlike organisms were identified in the meninges and brain. One large vessel in the brain, as well as several in the meninges, contained bacterial colonies apparently composed of coccus forms. In the walls of the cavernous sinus were areas of acute inflammation.

ETIOLOGIC AGENT

The strain of Torula histolytica isolated from our patient was similar to other strains identified as this organism. The yeastlike cells were generally spherical and about the size of erythrocytes. Young cells examined by the hanging drop method appeared doubly contoured and highly refractile. Budding was evident, but more than a single bud per cell was rarely seen. The cytoplasm of the cell was finely granular. No mycelium was observed. The cells found in old cultures were thick walled, the prominent outer shell being of varying thickness. Some of the shells appeared to be in the process of being shed. Numerous smaller cells surrounded by a thin membrane were also present. The contents of some of the larger cells were coarsely granular and were arranged in globular fashion. These observations are consistent with those of Todd and Herrmann,[4] who proposed that the various forms noted represent stages in a life cycle.

Growth of the organisms occurred on plain agar, rabbit's blood agar and Sabouraud's agar, pinpoint colonies appearing on the enriched medium during the third day of incubation at 37 C. Multiplication of the cells took place in the cerebrospinal fluid, which was kept at room temperature. It also occurred in nutrient broth. Colonies on the solid mediums were creamy white and droplet shaped. On aging, the colonies became darker, approximating a tan shade. The growth on agar slants seemed to flow downward during the several weeks of observation. Nutrient broths, containing 1 per cent of dextrose, levulose, mannose, galactose and sucrose, supported the growth of the organism. Each of these sugars was fermented in from four to six days without the formation of gas. Maltose, lactose, xylose, mannitol and sorbitol were not fermented.

Our strain of Torula histolytica was found to be pathogenic for mice. Of 30 adult white mice in which 1 cc. amounts of a moderately dense suspension of the culture were injected intraperitoneally, 26 died within a period of five to twenty-four days. (The average was about ten days.) The organisms were recovered from the animal tissues in pure culture, but no gross lesions were noted. The intracranial injection of smaller amounts of the culture was uniformly fatal for 20 mice, the survival period being from two to twenty-two days. (The average was about seven days.) Two rabbits and 2 guinea pigs in which 5 cc. amounts of the culture were injected intraperitoneally survived. One rabbit that was inoculated through the scarified cornea died; a pure culture was obtained from its brain.

RECORDED CHANGES IN THE CEREBROSPINAL FLUID

The reports of most of the cases to which reference is made in the extensive bibliographies of Levin [3] and of Crone, DeGroat and Wahlin [5] have been examined for the data presented on the cerebrospinal fluid. These data, plus the recorded counts of leukocytes in the blood, have been plotted in the accompanying chart. The data for our patient are not included. The values indicated in the various graphs have been distributed irrespectively of the phase of the disease.

The changes in the cerebrospinal fluid may be summarized as follows: The total number of cells was less than 600 in every instance except one, the majority being lymphocytes. The percentage of polymorphonuclear cells occasionally reached 55. (The number of leukocytes in the blood was, as a rule, slightly

4. Todd, Ramona L., and Herrmann, W. W.: The Life Cycle of the Organism Causing Yeast Meningitis, J. Bact. **32**:89 (July) 1936.
5. Crone, J. T.; DeGroat, A. F., and Wahlin, J. G.: Torula Infection, Am. J. Path. **13**:863 (Sept.) 1937.

increased.) The pressure was increased in most instances, but only exceptionally was it above 450 mm. of water. Values for protein were usually over 40 mg. per hundred cubic centimeters of cerebrospinal fluid. The majority of the sugar determinations were under 40 mg. per hundred cubic centimeters. Values for chloride ranged between 460 and 760 mg. per hundred cubic centimeters. A composite gold curve approached 2333321100, although the individual curves varied considerably.

The various microscopic and chemical determinations in the cerebrospinal fluid of our patient resembled those reported in other cases of torulosis. The five determinations of sugar, with values ranging between 43 and 59 mg. per hundred cubic centimeters, were somewhat higher than the average, but this finding may possibly be explained as due to the administration of large amounts of sugar.

SUMMARY

A fatal case of torulosis, occurring in a man, a manufacturer of leather, aged 63, was somewhat unusual because of the acuteness of the disease and because of the fact that the etiologic agent was demonstrated early in the course of illness.

Clinical Notes, Suggestions and New Instruments

PAROXYSMAL FLUTTER OF THE DIAPHRAGM SIMULATING CORONARY OCCLUSION:

FURTHER OBSERVATIONS ON AN EXTRAORDINARY CASE CONTROLLED BY REFRIGERATION OF THE PHRENIC NERVE

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An extraordinary instance of paroxysmal flutter of the diaphragm with symptoms of angina pectoris was reported in 1936 by Porter[1] of Richmond, Va. Recently, Whitehead and Burnett of Denver and Lagen of San Francisco in a joint report[2] described interesting experiences with the same patient. The man appears to be a peripatetic transient, now about 60 years of age, who is admitted periodically to hospitals in various parts of the country seeking relief from attacks of acute precordial pain which are associated with and probably due to a remarkably rapid rhythmic fluttering movement of the diaphragm. It has been difficult to obtain a reliable medical history. The man is a pathologic liar and has greeted each of his medical examiners in recent years with fantastic life stories which agree only in their incredibility. He has been traced to a number of hospitals in different states under different names and has given widely dissimilar versions of his personal and medical history. Clinical features of his malady have, however, remained quite uniform. Previous observers have successfully controlled temporarily the paroxysms of pain and diaphragmatic flutter by injection of the phrenic nerves with procaine hydrochloride, and more lasting results were obtained by surgical procedures on the nerves. The episodes described in the present report on this patient are of interest because they represent painful attacks of flutter of the right leaf of the diaphragm, which were at first mistaken for coronary thrombosis and which were promptly controlled by chilling the skin overlying the right phrenic nerve with an ethyl chloride spray. The present study is amplified by simultaneous electrocardiographic and phonocardiographic records which illustrate the immediate effect of the chilling procedure on the unusual flutter phenomenon.

SUMMARY OF PREVIOUS REPORTS

When first seen by Porter in 1935 the patient was suffering from acute precordial pain and collapse. He stated that he was a deep sea diver who had been inadequately decompressed and it was thought that he was suffering from caisson disease. An easily visible rapid tremor in the epigastrium was noted. This pulsation was synchronous with curious rhythmic adventitious sounds which were audible over the precordium at a rate of more than 300 a minute. The phenomenon was found to be due to a rapid rhythmic flutter of the diaphragm. An area of extreme hyperesthesia over the precordium and extending down the inner aspect of the left arm is illustrated in the report. The blocking of the left phrenic nerve with procaine hydrochloride resulted in prompt cessation of the flutter, immediate relief of pain, and paralysis of the left leaf of the diaphragm. These results were, however, only temporary, and when pain and flutter recurred several hours later relief was again obtained by procaine infiltration of the right phrenic nerve, complete palsy of the right side of the diaphragm resulting. A complete clinical study of the patient failed to reveal any demonstrable cause for the unusual phenomenon. The patient disappeared from observation but was traced to other hospitals in Eastern states.

The report by Whitehead and Burnett describes the patient's admission to the Colorado General Hospital on May 20, 1936. At that time he gave a different name and stated that he had been a miner and trapper all his life. He was suffering from severe precordial pain which radiated into the left arm. The clinical picture corresponded closely to that described by Porter, with definite precordial hyperesthesia, an essentially normal cardiac mechanism and rapid adventitious precordial sounds which were found to be due to fluttering movements of the diaphragm. Attempts to control the severe pain with opiates and with inhalations of oxygen and carbon dioxide mixtures were unsuccessful. Infiltration of the left phrenic nerve with procaine hydrochloride gave relief from the pain and flutter stopped for more than two days, after which time transient recurrences of both pain and flutter were noted. A left phrenicotomy was performed, June 3, 1936, and symptoms and flutter ceased promptly. The following day the body temperature rose to 112 F. This was apparently rechecked by a number of observers and no evidence of malingering could be detected. It was suggested by these observers that both the flutter phenomenon and the hyperpyrexia may have had hysteria as a basis. Three days after the phrenicotomy flutter recurred once more. The right phrenic nerve was then exposed and crushed, resulting in relief for another three days. Once more the pain recurred, but the uncooperative behavior of the patient made it difficult to verify the presence of transient flutter of the diaphragm at that time.

Dr. Lagen's postscript to the report of Whitehead and Burnett records the study of the patient when he was admitted to the University of California Hospital under the sixth traceable name. This time he stated that he was a Texas deputy sheriff who was stricken with his first attack of pain while chasing bandits. Lagen's observations were similar to those previously recorded. The patient suffered from precordial pain and hyperesthesia and showed evidence of rapid flutter of the diaphragm with audible swishing precordial sounds. It was concluded that recurrence of the flutter phenomenon, in spite of previous section of the phrenic nerve, suggested the presence of an accessory phrenic nerve on the left or of activity of the lower intercostal muscles. The left phrenic nerve was now avulsed in an attempt to stop the attacks, and both pain and flutter stopped promptly on the operating table when a faradic current was applied to the nerve prior to its exeresis. Complete relief of pain and cessation of the abnormal diaphragmatic movements followed removal of the nerve. Postoperative temperature rises as high as 107 F. were thought by the California observers to be due

From the Department of Medicine of the University of Oregon Medical School.

1. Porter, W. B.: Diaphragmatic Flutter with Symptoms of Angina Pectoris, J. A. M. A. **106**:992 (March 21) 1936.

2. Whitehead, R. W.; Burnett, C. T., and Lagen, J. B.: Diaphragmatic Flutter with Symptoms Suggesting Angina Pectoris, J. A. M. A. **112**:1237 (April 1) 1939.

to malingering. On his twelfth postoperative day he presented the picture of left-sided hemiplegia which was identified as hysterical in origin and which cleared promptly. On the thirteenth postoperative day flutter of the right half of the diaphragm recurred and was associated once more with pain in the chest. Temporary relief was obtained with faradic stimulation through the skin of the right phrenic nerve and by

Fig. 1.—Electrocardiogram and stethogram taken at height of paroxysm. [illegible]

avertin with amylene hydrate anesthesia. The right phrenic nerve was finally exposed and the fibers which were not destroyed in the previous crushing operation were severed. No further evidence of flutter was noted. He was known to have been admitted the following month to another hospital in California with a recurrence of the flutter, and after signing his release returned the next day with hysterical hemiplegia.

REPORT OF PRESENT STUDY

The present report deals with observations on this patient beginning June 13, 1942. He was brought to the hospital at noon that day and stated that he had collapsed on the highway a short while before while walking in the hot sun. He complained bitterly of intense precordial pain, which, he said, began with such suddenness and severity that he was thrown to the pavement. The impression on admission was that he was suffering from acute coronary occlusion, and though he was given full doses of morphine he obtained only slight relief. When I first saw him five hours after his admission it was obvious that he was in severe distress. He was lying on his right side

Fig. 2.—In lead 2 the electrocardiograph was synchronized with the phonocardiograph; a microphone was placed at level of the eighth rib in the anterior axillary line. [illegible] indicate flutter sounds.

groaning audibly with each breath. Periodically he winced with pain and clutched at his left breast as though lightning-like exacerbations of his pain had suddenly struck him. In spite of his apparent great distress he was able to give a fairly detailed account of his heroic exploits as a deep sea diver. However, he was gratuitously evasive of the details of his recent medical history. He did state that his case had been written up in The Journal, and he recalled the date of the report by Dr. Porter. The article was promptly consulted and the other puzzling clinical phenomena were immediately explained.

His temperature was 98.4 F., the blood pressure was 110 systolic and 70 diastolic, and the radial pulse rate was 75 a minute, normal in rhythm and volume and equal on the two sides. The fundi showed moderate sclerosis of the larger retinal arteries but no appreciable arteriolosclerosis. The mouth was [illegible]; the tongue and pharynx were not remarkable. There was a deep linear scar extending downward from the [illegible] of his lower lip due to an old injury, the origin of which varied greatly each time it was told. [illegible] noted in the neck over the scars of the previous operations on the phrenic nerve. The scars themselves were somewhat tender to light touch. He was considerably under his normal weight and stated that he had lost much weight during the foregoing year while spending most of his time under water in a submarine. The thorax seemed to expand somewhat feebly but equally on the two sides.

The percussion note as far as could be determined was everywhere resonant, though it was impossible properly to percuss the definitely hyperesthetic precordial area. It was likewise difficult accurately to outline the cardiac borders, though the impression was obtained that the heart was of normal contour and not significantly enlarged. Over the entire chest could be heard a rapid tapping, somewhat shuffling sound, regular in rhythm, the rate of which was around 300 a minute. It was found that by counting every other beat the rate could be fairly accurately determined. The sound was most distinctly heard over the base of the right lung and low in the right axilla. The sound seemed synchronous with a rapid pulsation which was visible in the intercostal spaces of the right lower part of the chest and in the epigastrium.

The abdominal examination revealed nothing abnormal. The genitalia and extremities were essentially normal. Neurologic examination was negative except for miosis due to morphine.

Fig. 3.—Simultaneous electrocardiogram (lead 2) and [illegible]

Fluoroscopic examination of the chest revealed an extraordinary picture. The heart was normal in size and contour. The left half of the diaphragm was high and immobile and overlay an air-distended stomach. Paradoxic movement of this portion of the diaphragm was clearly evident. The right half of the diaphragm presented a most striking phenomenon of [illegible] but otherwise normal excursions of this structure could be seen which were synchronous with thoracic respirations. Superimposed on these movements were remarkably rapid oscillations, regularly rhythmic at a rate of about 300 a minute. The excursions of these smaller pulsations were about 1 cm., and the entire right half of the diaphragm was involved. Transmitted pulsations were visible along the border of the right side of the heart, superimposed on the normal cardiac contractions. Inhalation of 100 per cent oxygen gave considerable relief from the pain but did not affect the flutter.

In view of the respiratory distress and the already paralyzed left diaphragm it was with hesitation that interference with the phrenic nerve on the right side was attempted. It was suggested by Dr. James Conant that refrigeration of the right phrenic nerve be attempted. This was carried out with the patient in front of the fluoroscope so that the diaphragmatic movements could be directly observed. With the attachments of the electrocardiograph and the phonocardiograph in place, ethyl chloride was sprayed on the skin directly over the scar of the operation on the right phrenic nerve in the neck. Within ten seconds after the spraying of the refrigerant was begun the flutter sounds

were no longer audible on the stimulation of the plesimetric graph, and the fibs subsequently confirmed the cessation of the flutter at this time. Within twenty seconds after the onset of the experiment the right diaphragm was seen to be high and completely immobile. It moved not at all with ordinary respiration, and the flutter was no longer visible. Within thirty seconds after the beginning of the operation the patient volunteered that the pain had entirely ceased completely. Within a few moments after this, however, he complained of difficulty in breathing and soon became quite frightened as did his medical observers. His breaths rapidly became quick and labored frequently with grunting inspirations for the next ten minutes. At the end of this time (approximately three minutes after the onset of the experiment) optical plesimetric examination was once more visible on the right and within five minutes of the beginning of the radiographic examination the patient was lying quietly and breathing comfortably. He was now completely free from pain for the first time in thirty-six hours.

Fig. 4.—Electrocardiogram and plesimetric tracings after the onset of the operation. A plesimetric tracing is also shown at the end of the operation when the pain had entirely ceased.

The earlier examination was at this time clinically and electrocardiographically repeated. The heart rate, previously consistently slowed by the flutter ventricle and the respiratory grunting, were distinctly faster for the first time and were not unusual except for a short rough systolic murmur. The blood pressure was 160 systolic and 70 diastolic in the left arm; the spinal and radial pulses were synchronous and the rate was 64. The pronounced hyperalgesia persisted for many hours after the disappearance of the pain but became gradually less evident.

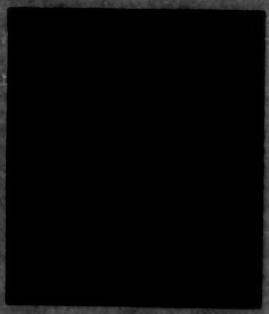

Fig. 5.—Tracing of chest showing thin portion of line of diaphragm.

After his relief from pain, the patient's consciousness changed completely; he seemed profoundly grateful and showed considerable interest in his experience. He asked for and ate his first food in two days. He remained free from pain for seventy-three hours, when he again suffered sudden onset of pain and roughly duplicated the previous experience. Clinically the picture was identical with that of his initial attack. Flutter was once more readily audible and distinctly visible. Rebel electric was again sprayed over the right phrenic nerve in the neck and the patient was told to signal when the pain was relieved. He gave the signal one minute after the spray was started, and at the moment both audible and visible evidences of the flutter phenomenon abruptly ceased. Four hours later he again complained of pain. He was not examined at this time but was given morphine, with little relief. The pain stopped abruptly four hours later.

A final attack occurred on the afternoon of his third day in the hospital and for the first time the accompanying and subsequent disorder noted by previous observers became evident. The flutter never was apt to distract as they had previously been and caused somewhat slower and irregular. The flutter sounds were only faintly audible and phonocardiographic records confirmed the long diastole, slower and irregular rhythm over of the ventricles. Though the patient stated that he was in pain, he seemed much more comfortable than during his previous attacks. He was much more talkative and showed a marked disregard of circumstances on the medical personnel and many in general, displayed with histrionic flair of his own condition. Morphine was prescribed in small doses; the patient fell asleep and awakened in the morning considerably less tense and quite drowsy. He left the hospital eight hours later at his own request and in perfect comfort.

COMMENT

The curious personality of the patient has made difficult the accurate evaluation of certain aspects of his clinical picture. His appearance in hospitals in various parts of the country with a painful unduly responding system has suggested to at least one observer that the patient is a morphine addict who utilizes his unusual illness as a means of obtaining the drug. It was the definite impression of Porter that this was not the case. The present study likewise led rather decidedly to the conclusion that the man was not a drug addict. Morphine in generous doses afforded only moderate relief when flutter was present. When the phenomenon disappeared the patient remained in perfect comfort for an entire day with no medication whatever.

Instances of abnormal diaphragmatic mobility are infrequent but not rare. During both the acute and the chronic stage of epidemic encephalitis such disturbances occur. They have been classified by Marie[1] into (1) abnormalities of the respiration proper such as tachypnea and bradypnea, (2) spasmodic cough and (3) respiratory tics. Recorded in the literature are cases of poliomyelitic diaphragmatic tic which were more or less permanently relieved by interrupting the phrenic nerve by injection of procaine hydrochloride or alcohol or by avulsion, crushing or removing the nerve. Dunsmore[2] and Gamble, Ryerson and Meltzer[3] have reported cases of tic of the diaphragm which were controlled by completely crushing the phrenic nerve and treating it directly with ethyl chloride. A feature of special interest in the present case is the successful control of the tic by the simple procedure of chilling the nerve by spraying the overlying skin in the neck with a rubefacient. Though the complete diaphragmatic palsy lasted for only four minutes, the disappearance of the tic for more than seventy-three hours during the first experiment suggests the use of this measure for the momentary control at least of such disturbances of diaphragmatic mobility including possibly irremediable hiccup. It is likely that in the present instance the absence of subcutaneous fat facilitated the chilling of the nerve through the lateral skin. The ease of the previous operation on the phrenic nerve furthermore offered an excellent landmark for the radiographic procedure.

In general, unless the disorders of respiration associated with encephalitis lethargica are the respiratory tics are associated with any degree of thoracic discomfort. The association of such tremor pain with the diaphragmatic disturbance in the present case is unusual. Porter, in his original report on this patient, discussed the subject of so-called "diaphragmatic angina" and

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2. Dunsmore, C. H.: Spasmodic Tic Following Bronchitis, in Symposium on Peripheral Neuritis, Philadelphia, W. B. Saunders Co., 1917, p. 1.
3. Gamble, C. J.; Ryerson, G. S., and Meltzer, C. C.: Spasmodic Tic of Diaphragm: Operation and Cure by Avulsion of the Phrenic Nerve, J. A. M. A., 71: 1481 (Nov. 9) 1918.

the cardiodiaphragmatic syndrome and concluded that this case could be classed with what he feels is a definite clinical picture which closely simulates angina pectoris and which is directly related to a functional disturbance of the diaphragm. He suggests that abnormalities of diaphragmatic motility are more frequent than has been realized and that its symptoms may be mistaken for malingering or, as was the case in the present study, for coronary thrombosis.

The medical itinerary of this man is in all probability not complete. He will undoubtedly appear in other hospitals with a recurrence of his malady. Because his right phrenic nerve regenerated promptly after both crushing and section of its fibers, it is likely that complete relief from attacks of diaphragmatic flutter will in this case be afforded only by avulsion of the nerve.

SUMMARY

1. In supplementary observations on an extraordinary case of diaphragmatic flutter the tic was associated with severe precordial pain, which led to the erroneous diagnosis of coronary thrombosis.

2. Spraying the intact skin overlying the phrenic nerve in the neck on the involved side with ethyl chloride promptly controlled both the pain and the flutter.

3. This simple procedure may be of value in controlling other forms of disturbance of diaphragmatic motility, including intractable hiccup.

Medical Arts Building.

Special Article

GLANDULAR PHYSIOLOGY AND THERAPY

PHYSIOLOGY OF THE TESTIS

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CHICAGO

This special article is published under the auspices of the Council on Pharmacy and Chemistry. It is one of a series which will be published in book form as the second edition of "Glandular Physiology and Therapy." The opinions expressed in this article are those of the author and do not necessarily represent the views of the Council.—ED.

The testicle performs two principal functions that make it the specific and primary organ of reproduction. The basic one is the formation of mature spermatozoa capable of fertilizing the egg: this is, of course, essential for the perpetuation of the race. The second function—the secretion of hormones—must be regarded as one supplementary to the formation of germ cells, since it contributes toward insuring delivery of mature spermatozoa in the proximity of mature eggs where fertilization can occur. Two concrete essentials are involved here: (1) the induction of behavioristic reactions, sometimes designated as sex drive or mating instincts, and (2) the provision of a vehicle of transportation for spermatozoa and of control of the ejaculate—either its discharge into the aquatic medium surrounding the egg in the case of lower vertebrates or its introduction into female passages by an organ of intromission. Just so far as either the formation of germ cells or the mating inclinations are defective the animal becomes deficient in its reproductive capacity; and whereas the two functions obviously cooperate and supplement each other toward the final goal, there appears to be an advantage in discussing them as though they were entirely separate.

From the Hull Zoological Laboratory of the University of Chicago.

I. SPERMATOGENIC ACTIVITY

Animals pass through variable periods in a juvenile state prior to attaining a stage of sexual maturity. Whereas at birth most systems assume their normal function, the production of germ cells is one of the last to be attained. Spermatozoa are produced during the second year of life in perhaps the majority of vertebrates, but in some they are produced both earlier and later. Thus, in the rat they make their appearance in the seminiferous tubules about thirty-five to forty days after birth; they are seen in the epididymis at approximately the fiftieth day, and the animal may successfully inseminate females by about the seventieth to the eightieth day. In the guinea pig spermatozoa are found in the testis by about the fiftieth to the seventieth postnatal day and are first discharged in ejaculations, induced by electric stimulation on the head, from the fifty-fourth to the one hundred and sixteenth day.[1] In contrast to such early production of spermatozoa, in man mature germ cells do not occur until about the twelfth to the fifteenth year.

A great deal of variability occurs among vertebrates with regard to continuity in germ cell production. In probably the largest number of species spermatozoa are developed but once during the year and are present for relatively short periods; such animals are seasonal breeders. Others, including the rat, rabbit, guinea pig and man, which are continuous breeders, produce spermatozoa continuously.

Seasonal production of spermatozoa is quite regular throughout the classes of vertebrates; hence it must be considered the basic plan. A number of the lower vertebrates enter actively on spermatozoan differentiation in the late winter and early spring months in preparation for the usual spring breeding activity, but some produce spermatozoa in the fall months and carry them over the winter for use in the following spring. A notable exception to the ordinary course for birds is exhibited by the chicken which has been selectively cultivated for reproductive activity: Whereas in most birds the strictly seasonal activity of the testis rules, the cock, as well as the hen, manufactures mature gametes throughout the year.

Among mammals, the wild rodent of the Midwest (Citellus tridecemlineatus) has been rather carefully investigated by Wells.[2] This ground squirrel as observed in the Chicago area enters its subterranean burrow for a period of semihibernation usually in October and emerges above ground in April. Spermatogenic activity becomes evident during January, and on emergence most males have quantities of spermatozoa in the epididymis. Subsequent to the breeding season in April-May, testicular involution begins, and frequently by June-July spermatozoa are absent and the testis is receding. Spermatozoa are, therefore, usually absent from about late June until March; during the low period the testicle may be one-twentieth the weight of the fully active organ.

The predominant characteristic among males of the vertebrate group as well as among the invertebrates is thus a periodic testicular activity, quite restricted to definite seasons and therefore controlled to some extent at least by environmental agencies. Definite cyclic periods, on the part of the females at least, still rule

1. Sayles, E. D.: Postnatal Development of Reproductive System in Male Guinea Pigs and Its Relation to Testis Hormone Secretion, Physiol. Zool. **12**: 256 (July) 1939.

2. Wells, L. J.: Seasonal Sexual Rhythm and Its Experimental Modification in the Male of the Thirteen-Lined Ground Squirrel (Citellus Tridecemlineatus), Anat. Rec. **62**: 409 (July 25) 1935.

even in those forms that have become freed to a marked degree from the annual cycle; in such animals estrus cycles retain a controlled definiteness that speaks for adequate regulation but one more nearly restricted to internal control and less definitely influenced by environment. The males of these types usually show continuous testicular activity, and whether rhythms of sperm production occur in them is still to be shown. In the sparrow a definite diurnal rhythm is exhibited, in which spermatogenic divisions occur within a few hours after midnight, when the body temperature of the sleeping bird is low.[3]

The termination of germ cell production in a complete life history is an indefinite event, and it may be questioned whether in nature an animal lives to such an advanced age that spermatozoa are no longer produced. In man, on whom somewhat more exact information is available, it is well known that some males lack spermatozoa at the age of 50 years, whereas others may produce them abundantly up to the age of 90 years.[4] It is questioned whether the tendency to apply the term "senile" to men lacking spermatozoa either serves any useful purpose or represents the facts. Various organs may exhibit marked pathologic changes or atypical functions due to many different causes, and it is well known that testicular activity is in some respects a sensitive function influenced by many different bodily states.

Pituitary Factors Influencing Spermatogenesis.—The formation of spermatozoa is subject to many modifying controls. One important control, if not the most important, is that exercised by the pituitary gland. As indicated somewhat earlier, the influence of the pituitary gland in control of the gonads was most convincingly demonstrated by Smith [5] and Smith and Engle [6] for the rat and mouse, and their observations have been abundantly confirmed on many species. Removal of the pituitary gland in the functional adult male leads immediately to involutionary changes in the testes and in the young male prevents the attainment of sperm formation. Implantations of fresh pituitary tissue or injections of a proper extract effect a satisfactory substitution and permit continuance of spermatogenic function. Prevention of the immediate spermatogenic involution following hypophysectomy has been accomplished by the administration of testis extracts, chemical androgens,[7] progesterone [8] and yeast extract,[9] but none of these substances afford reparative means if administration is delayed until the damage following hypophysectomy has occurred.

Stimulation of spermatogenesis, as evidenced by precocious formation of germ cells, has been attained by the administration of anterior pituitary materials or other gonadotropic agents in lower vertebrates,[10] in chicks [11] and in the seasonally active ground squirrel [12] but not in rats [13] or monkeys.[14]

The pituitary gland is thus one of the main factors in the control of spermatogenesis, and many other apparently separate phenomena in the modification of the testis appear to be secondary to the pituitary modification:

1. Seasonal testicular activity, in many respects at least, seems to be a problem of pituitary activity. In the ground squirrel the period of spermatogenic activity is a period of high gonadotropic activity of the pituitary, and the period of testicular inactivity one of low gonadotropic activity. Testes in such animals can be thrown into marked spermatogenic activity during the normal inactive period, provided pituitary materials are administered. Likewise, the marked stimulating power of light, especially on the bird, in which Rowan,[15] Bissonnette [16] and others have been able to cause production of spermatozoa in midwinter by gradually increasing the length of day by means of electric light, is principally through the eye. Benoit [17] demonstrated in the duck that light stimulates pituitary activity; hence the effect of light on the testes is only secondary, depending on pituitary activation.

2. Dietary phenomena, such as severe inanition or lack of vitamin B (the injury to the testes appears to be principally nutritional, rather than specifically related to the vitamin deficiency), induce spermatogenic involution.[18] That this is a secondary effect, due to a primary influence on the pituitary, is indicated by the low gonadotropic potency of pituitaries from such animals.[19]

3. Androgens as well as estrogens are injurious to testes, especially in young males, and the evidence is strong that the harmful influence is again secondary to inhibition of the pituitary gland.[20] Despite continued injections of harmful doses, no injury is apparent if at the same time the animal is provided with pituitary materials. Androgens administered to man induce

3. Riley, G. M.: Experimental Studies on Spermatogenesis in the House Sparrow, Passer Domesticus (Linnaeus), Anat. Rec. **67:** 327 (Feb. 25) 1937.

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20. Moore, C. R., and Price, Dorothy: Gonad Hormone Functions and the Reciprocal Influence Between Gonads and Hypophysis, with Its Bearing on the Problem of Sex Hormone Antagonism, Am. J. Anat. **50:** 13 (March) 1932.

severe reduction of sperm; recovery occurs on discontinuance of the treatment.[21]

Nonpituitary Influences.—Other agents harmful to spermatogenic activity do not clearly involve the pituitary gland:

1. Cryptorchism. Man, as well as other mammals, occasionally experiences retention of the testicle in the abdomen: Embryonic development has been imperfect to the extent that descent into the scrotum is not accomplished, but the organ shows as a defect only the lack of completed spermatogenesis.

It is now recognized that the failure in germ cell production in the undescended testis is merely the function of the higher temperature of the abdomen; the scrotum is a localized thermoregulator by virtue of its thin walls, modified skin, absence of subcutaneous fat, numerous sweat glands and ability to relax and separate the testicle from close contact with the body.[22] This conception is gained from a consideration of several different lines of evidence: (*a*) Simultaneous recording of temperatures in the abdomen and in the scrotum for rats, rabbits and guinea pigs reveals that scrotal temperatures are from 1 to 8 degrees (C.) lower than abdominal temperatures. (*b*) In an adult, elevation and confinement of the active testes in the abdomen lead to complete disorganization of seminiferous tubules within five to seven days, with continual decline as long as the testes remain extrascrotal; return to the scrotum is followed by renewed formation of spermatozoa, provided the injury is not of too long standing. (*c*) A single exposure of the scrotum to a temperature 6 degrees (C.) above body temperature for a period of ten to fifteen minutes leads to degeneration of seminiferous tubules within a period of ten days; recovery of sperm formation follows if the injury has not been too severe.[23] (*d*) Insulation of the scrotum of a ram with woolen coverings, preventing the natural regulation of scrotal temperature, leads to degeneration of seminiferous tubules and loss of all sperm production. Such an animal, therefore, is sterilized by its own body heat through prevention of the function of the scrotal thermoregulatory capacity. (*e*) It has long been known that a testis graft located in any well vascularized portion of the body of any amphibian or bird will carry spermatogenesis to complete spermatozoon formation. In mammals this capacity is likewise present, subject to the limitations of adequate environmental temperature. A rat or a mouse testis graft will produce spermatozoa months after transplantation if the graft is scrotal in position or located in the anterior chamber of the eye;[24] each location provides a proper temperature.

In keeping with this principle, it is known that febrile states in man induce at least temporary loss of spermatozoa, and Mills[25] was able to correlate severity of testicular damage in soldiers dying in army camps with severity (high febrile states and duration) of disease—principally influenza and pneumonia; no specific toxicity was apparent.

2. Lack of vitamin E, a substance present in green vegetables, wheat germ and other products. This vitamin appears to be a specific requirement for sperm production, since in its absence, though good nutritional states are maintained, sperm production fails.[26] The action of this dietary disorder is not so clearly indicated to involve pituitary dysfunction as that of a deficiency of vitamin B.

3. Irradiation. Roentgen rays and mesothorium are destructive to spermatogenesis if employed in large enough doses. Sterility is readily induced thereby and appears to be irreversible.

4. Alcoholism. Alcohol in excess has been shown to abolish spermatogenic activity in experimental animals and man.

5. Confinement. Especially in wild animals, this condition frequently induces sterility. It is generally known that cage confinement of dogs induces loss of sperm production. However, Huggins[27] and his associates recently noted ultimate adaptation and adjustment to such confinement; after a period of some four months their caged dogs regained the power of sperm production. This recovery is easily determined by subcutaneous injection of pilocarpine hydrochloride, which induces discharge of spermatozoa along with copious prostatic secretion. This phenomenon may later be proved to have pituitary involvements.

6. Vasoligation. This procedure, though held to produce spermatogenic atrophy by Bouin and Ancel[28] and especially by Steinach,[29] has been abundantly proved to be without such effect. Almost a century prior to the publication of this erroneous conception by Steinach, Sir Astley Cooper[30] proved on his own dog that ligation for a duration of several years did not interfere with spermatogenesis. A testis graft in which no outlet is present will produce spermatozoa in amphibia, birds and mammals. Occlusion of the vas deferens of months' and years' duration in the cock and in at least eight species of mammals, including man, fails to cause testis degenerations, and, indeed, congenital absence of an epididymis and vas deferens in an adult guinea pig did not prevent active sperm formation.[31] For further details of these phases of testicular function, see Moore.[32]

II. SECRETORY ACTIVITY

Although it has been known since biblical times that castration produces the eunuch—concrete evidence that the testes exert decided effects on the organism—it is less than a century since the clear demonstration of Berthold,[33] in 1849, that the effect is exerted through

21. Heckel, N. J.: The Influence of Testosterone Propionate upon Benign Prostatic Hypertrophy and Spermatogenesis: A Clinical and Pathological Study in the Human, J. Urol. **43**: 286 (Feb.) 1940. McCullagh, E. P., and McGurl, F. J.: The Clinical Use of Testosterone Propionate, ibid. **42**: 1265 (Dec.) 1939.

22. Moore, C. R.: Properties of Gonads as Controllers of Somatic and Psychical Characteristics: I. Testicular Reactions in Experimental Cryptorchidism, Am. J. Anat. **34**: 269 (Nov.) 1924; II. Heat Application and Testicular Degeneration: The Function of the Scrotum, ibid. **34**: 337 (Nov.) 1924. Moore, C. R., and Quick, W. J.: The Scrotum as a Temperature Regulator for the Testis, Am. J. Physiol. **68**: 70 (March) 1924.

23. Young, W. C.: The Influence of High Temperature on the Guinea Pig Testis: Histological Changes and Effects on Reproduction, J. Exper. Zool. **49**: 459 (Nov. 5) 1927.

24. Moore, C. R.: Testis Graft Reactions in Different Environments (Rat), Am. J. Anat. **37**: 351 (May) 1926. Browman, L. G.: Testicular Heterotransplantation in Rats and Mice, J. Exper. Zool. **75**: 283 (Feb. 5) 1937. Turner, C. D.: Intra-Ocular Homotransplantation of Prepuberal Testes in the Rat, Am. J. Anat. **62**: 101 (July) 1938.

25. Mills, R. G.: The Pathological Changes in the Testes in Epidemic Pneumonia, J. Exper. Med. **30**: 505 (Nov.) 1919.

26. Evans, H. M., and Bishop, K. S.: On the Existence of a Hitherto Unknown Dietary Factor Essential for Reproduction, J. A. M. A. **81**: 889 (Sept. 15) 1923. Evans, H. M.; Burr, G. O., and Althausen, T. L.: The Anti-Sterility Vitamine Fat Soluble E, in Memoirs of the University of California, Berkeley, University of California Press, 1927, vol. 8.

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29. Steinach, E.: Verjungung durch experimentelle Neubelebung der Alternden Pubertätsdruse, Arch. f. Entwchlngsmech. d. Organ. **46**: 557, 1920.

30. Cooper, A. P.: Observations on the Structure and Diseases of the Testis, London, Longman, 1830.

31. Moore, C. R.: Supplementary Observations on Mammalian Testis Activity, Anat. Rec. **48**: 105 (Jan. 25) 1931.

32. Moore, C. R.: Biology of the Testes, in Allen, Edgar; Danforth, C. H., and Doisy, E. A.: Sex and Internal Secretions, Baltimore, Williams & Wilkins Company, 1939, chap. 7.

33. Berthold, A. A.: Transplantation der Hoden, Arch. f. Anat., Physiol. u. wissensch. Med. 1849, p. 42.

a humoral substance distributed by the circulation and not by prescribed nerve pathways. Berthold castrated the cock and noted that the bird became a capon. However, if after removal of the testis this organ was thrown back into the peritoneal cavity or was placed under the skin and persisted with good vascular connections, the bird remained a typical cock instead of becoming a capon. The site of the incorporated tissue was inconsequential, but vascular connections were all important. Incidentally, the transplanted testis continued to produce spermatozoa, and it remains essentially to the credit of Bouin and Ancel that, at about the beginning of the present century, they demonstrated that the masculinizing influence of the testis was independent of the active production of germ cells. Thus the testicle exerts its hormone-secreting capacity as a function secondary to germ cell formation, and although attempts have been made to relegate the entire secretory function to the interstitial cells of Leydig, there is much information to suggest that spermatogenic activity contributes to hormone secretion. Some writers have postulated that an entirely separate hormone is produced by the germinal epithelium, but this cannot be granted on the basis of the evidence presented.

Methods of Detection of Testicular Hormone.—The hormone-secreting capacity of the testes and the influence of this hormone in the organism have been studied rather intensively during the last two decades. Methods of detecting the active principles involved have been based largely on warding off or repairing changes occurring after castration, and as yet the only satisfactory indicator is the animal itself. Most of the classes of vertebrates have been employed in the study of testis hormone effects; invertebrates, in the main, do not show specific responses to castration. Certain species of fish exhibit characters representing responses to testis hormone, but these animals have not been used extensively as test objects for such substances. Amphibia, likewise, show certain characters of response to testis hormone—clasp reflexes, thumb or digital excrescences, dorsal fin fold growth and others—and some reactions have been proposed as means of detection of the hormone, without general adoption of the suggestions. Reptiles have been used but little in hormone studies, but birds have been used extensively.

The domestic cock when castrated shows immediate progressive shrinkage in comb and wattles, but hormone introduced by transplantation of testes or hypodermically injected restimulates, almost immediately, the growth of these head furnishings. Comb response in relation to testicular hormone subsequent to the early work of Berthold has been studied rather intensively by Pezard,[34] Benoit,[35] Caridroit,[36] Domm [37] and others. Gallagher and Koch [38] perfected the method of using such responses as quantitative indicators of the hormone activity in testicular tissue extracts, urine extracts and pure chemical androgens. Comb growth is perhaps the most frequently employed indicator for androgenic substances at the present time.

The use of mammals as indicators of testis hormone has depended in the main on changes occurring in the accessory reproductive organs after castration—these organs being the principal site in the organism of morphologic responses to the hormone.

1. Spermatozoa in the epididymis of the guinea pig are short lived in the absence of testis hormone, and this response has been employed to denote the presence of active substances in extracts of the testes.[39]

2. The guinea pig when stimulated by an electric current directed to the head ejaculates a coagulable substance and the reaction is a certain demonstration of function of the prostate gland and seminal vesicles. This function is dependent on the presence of testis hormone. The reaction and its modification by castration and by the injection of extracts containing testis hormone were described by Moore and Gallagher.[40]

3. The rat prostate gland responds to castration within four days by loss of certain definite morphologic features. The responses to extracts of testis hormone have been described by Moore, Price and Gallagher.[41]

4. Rat seminal vesicles demonstrate castration changes within forty-eight hours, and the changes can be clearly modified by administering testis hormone (Moore, Hughes and Gallagher).[42]

5. In a similar manner the vas deferens (Vatna) [43] and Cowper's gland (Heller [44]) have each proved sufficiently responsive to testis hormone to constitute within themselves responsible indicators of the presence of this substance.

Still other methods of detection of the testis hormone have been utilized. The seminal vesicles of the mouse have been used by Loewe and Voss,[45] and by Martins and Rocha e Silva.[46] The mouse adrenal exhibits rather definite changes in relation to testis hormone. Prostate secretion in the dog is readily stimulated by injection of pilocarpine hydrochloride, and Huggins and associates [27] have shown its loss through castration and reestablishment by injected androgens. In man, responses in eunuchs are now definitely known; many changes that involve penis growth, erections, ejaculations, voice changes, prostate growth and other related activities have been abundantly described within the last five years.[47]

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36. Caridroit, F.: Étude histo-physiologique de la transplantation testiculaire et ovarienne chez les Gallinacés, Bull. biol. de la France et de la Belgique **60**: 135, 1926.

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41. Moore, C. R.; Price, Dorothy, and Gallagher, T. F.: Rat-Prostate Cytology as a Testis-Hormone Indicator and the Prevention of Castration Changes by Testis-Extract Injection, Am. J. Anat. **45**: 71 (Jan.) 1930.

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43. Vatna, S.: Rat Vas Deferens Cytology as a Testis Hormone Indicator and the Prevention of Castration Changes by Testis Extract Injections, Biol. Bull. **58**: 322 (June) 1930.

44. Heller, R. E.: Cowper's Gland and Its Reaction to Castration and to Different Sex-Hormone Conditions, Am. J. Anat. **50**: 73 (March) 1932.

45. Loewe, S., and Voss, H. E.: Gewinnung, Eigenschaften und Testierung eines männliches Sexualhormons, Sitzungsber. d. Akad. d. Wissensch. Wien, Math.-Naturw. Kl., 1928, vol. 29, no. 20.

46. Martins, T., and Rocha e Silva, A.: In The Seminal Vesicles of the Castrated Mouse; Test for the Testicular Hormones, Mem. do inst. Oswaldo Cruz, supp., p. 196.

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Isolation of Testis Hormone.—Prior to 1927 the effects of testis hormone were studied almost entirely from changes caused by castration and from the effects of transplantation of testes, but in that year McGee and co-workers [48] succeeded in extracting from fresh testicles of the bull a substance that exerted comb growth–stimulating capacities in capons. As rapidly as short time indicators were developed in laboratory mammals, such extracts proved their capabilities of substituting for the mammalian testis secretions.[49] These active extracts, obtained in lipoid fractions after original extractions of the tissue in benzene, were further purified by Gallagher and Koch,[58] and their assay was established on a fairly satisfactory quantitative basis.

In 1929 Loewe and Voss [43] and Funk and Harrow [50] obtained comb growth–stimulating substances from human male urine. Through concentration of urinary extracts and purification, Butenandt obtained two pure crystalline substances, androsterone and dehydroandrosterone, which were definitely androgenic, and determined the structural formulas.[51] Starting from the suggested formula of androsterone, Ruzicka and co-workers [52] almost immediately produced this substance synthetically from cholesterol.

Comparative studies of the activity obtained with extracts from urine and from testes, carried on especially by the Laqueur laboratory in Amsterdam, Netherlands,[53] suggested that two different substances were involved, and Gallagher and Koch [54] demonstrated differential responses of the respective active principles to boiling alkali. In 1935 David and others [55] obtained from extracts of fresh testis a pure chemical substance, testosterone, that showed greater androgenic properties than androsterone. Testosterone likewise was produced synthetically at once by both the Butenandt [56] and the Ruzicka [57] group. Combinations of the parent substance, especially with certain fatty acids, greatly enhanced the androgenic effect in test organisms, and a large series of pure chemical compounds are now available that exert marked effects. One of the more active compounds is testosterone propionate, and this is the substance now most frequently used in clinical treatment. Its administration by injections is the more usual, but application of the substance as a cutaneous ointment reveals its ready penetration through the skin with the usual internal organ responses.[58] Whether the natural hormone secreted by the testis is represented by one of the forty or more active compounds now available is not certainly known, but it is believed that the naturally secreted hormone may be a substance at least closely allied to testosterone, perhaps in some especially effective chemical combination. It is not known whether the naturally secreted hormone is the same in different species of mammals or in the different classes of vertebrates, but several different pure chemical androgens are individually capable of effective substitution for the naturally secreted hormone in probably all vertebrates.

Periods of Hormone Secretion.—The time of onset of testis secretion of hormone cannot be stated more definitely than that the onset is largely responsible for the beginning of puberal development. Whether testes secrete active substances into the blood stream during embryonic life is yet to be demonstrated. In the rat secretion is evident by about the fortieth day after birth, from secretory development of the prostate gland and seminal vesicles,[59] and castration at birth induces delay in the development of these accessory reproductive structures.[60] In the guinea pig hormone secretion is evident by the thirtieth day, when ejaculation is induced by electrical stimulation.[1] In man, studies on the prostate by R. A. Moore [61] suggest a low grade secretion about the tenth to the thirteenth year. In animals whose breeding is constant, hormone secretion is continuous from its inception to its natural decline, but the latter event is less certain by date than the onset of secretion. Wiesner [62] failed to obtain a correlation between discontinuance of hormone secretion and old age in rats, and in man the evidence for termination of secretion suggests only a general decline at ages 60 to 70 years, with many evidences of good production in much later years.

The majority of vertebrates secrete testis hormone only at definite seasons, which usually coincide with their natural breeding periods. In a wild rodent secretion of testis hormone is limited to a period of about three months, and at other times of the year such accessory reproductive organs as the seminal vesicles, prostate and Cowper's gland remain essentially in the condition observed in the castrate, but capable of responding at any time to introduced hormone.[2] The natural period of rut, as well as of less definitely seasonal forms of the mating instinct, is conditioned by the hormone.

Modification of the Secretion of Testis Hormone.—In many respects the secretion of hormone and the formation of germ cells run parallel, and conditions which modify one function act likewise on the other; this, however, is not universally true, as will be mentioned later.

Removal of the pituitary gland or loss or diminution in its function precludes or diminishes secretion of hormone by the testis. Involutionary changes in the acces-

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50. Funk, C., and Harrow, B.: The Male Hormone, Proc. Soc. Exper. Biol. & Med. **26**: 325 (Jan.) 1929. Funk, C.; Harrow, B., and Lejwa, A., ibid. **26**: 569 (April) 1929.

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57. Ruzicka, L., and Wettstein, A.: Ueber die künstliche Herstellung des Testikelhormons Testosteron, Helvet. chim. acta **18**: 1264, 1935.

58. Moore, C. R.; Lamar, J. K., and Beck, Naomi: Cutaneous Absorption of Sex Hormones, J. A. M. A. **111**: 11 (July 2) 1938. Aharonel, A. R.: Percutaneous Administration of Testosterone Propionate for Dysmenorrhea, Endocrinology **26**: 765 (May) 1940.

59. Moore and others.[61] Moore and others.[48]

60. Price, Dorothy: Normal Development of the Prostate and Seminal Vesicles of the Rat with a Study of Experimental Post-Natal Modifications, Am. J. Anat. **60**: 79 (Nov.) 1936.

61. Moore, R. A.: The Evolution and Involution of the Prostate Gland, Am. J. Path. **12**: 599 (Sept.) 1936; The Histology of the Newborn and Prepuberal Prostate Gland, Anat. Rec. **66**: 1 (Aug. 25) 1936.

62. Wiesner, B. P.: The Experimental Study of Senescence, Brit. M. J. **2**: 585 (Sept. 24) 1932.

sory reproductive organs are quite similar after ablation of the pituitary gland and after castration. In the opposite direction, the administration of fresh pituitary substance or of the gonadotropic principle from other sources results in a marked precocious stimulation of the production of testis hormone or in an intensification of secretion already under way. Some of the indications for precocious hormone secretion are (*a*) the production of secretion granules in the epithelium of the rat seminal vesicle appreciably earlier than such granules appear in normal animals,[60] (*b*) increases in the gross fresh weight of the seminal vesicles of treated rats by 3,000 to 5,000 per cent,[12] (*c*) marked stimulation of the growth of comb and wattles in young chicks, and attempts at crowing and treading pen mates two weeks after hatching [63] and (*d*) tremendous increases in the size of all accessory organs of reproduction in ground squirrels artificially stimulated during the period of low sexual activity.[2]

A recognition of the fundamental influence of the pituitary gland on the secretion of hormone in the testis as well as on spermatogenesis suggests that hypogonadal states may represent fundamentally hypopituitary activity. Furthermore, since it has been established that there is a definite correlation between pituitary activity and testis activity in wild rodents whose breeding is seasonal, one is justified in assuming that the problem of seasonal reproductive activity is essentially a problem of seasonal control of the pituitary function. It would appear that an outstanding difference between mammals in which reproductive activity is continuous and those in which it is seasonal is that one group has a continuously active pituitary and the other a gland the activity of which is influenced by the season.

In view of the conditions portrayed, it is natural that attention should be directed to the problem of pituitary control. Present information is here very limited, but some suggestions may be mentioned. Environmental influences appear to play a decisive role in the seasonal control of the pituitary, but different elements of this complex may be active in different species. Light has been demonstrated to be an effective agent, particularly in the bird, but also in some mammals. Rowan's original demonstration [15] that the progressive daily addition of a few minutes extra light caused testicular activity to be stimulated in midwinter has been extended to show not only that the effective site of this influence is the eye but also that direct illumination of the pituitary gland through the orbit is effective in stimulating testicular activity; the illuminated pituitary possesses much higher gonadotropic activity than the nonilluminated ones.[7] Reproductive stimulation has likewise followed treatments of fish with light,[64] also treatments with temperature changes.[65] Failure of hormone secretion during straight inanition and during deficiency in vitamin B requirements is believed to be a secondary effect, due to primary inactivity of the pituitary.

The hormone-secreting capacities of the testicle in the total absence of spermatogenic activity was first emphasized by Bouin and Ancel.[28] Undescended testes, which are devoid of germ cell activity, exert nevertheless the typical masculinizing tendencies of normal organs; but, contrary to earlier ideas, such germ cell–free testes do not secrete more hormone than normal organs, but considerably less. In like manner, testis grafts devoid of spermatogenic activity may exert masculinizing influence, as do also testes injured through irradiations. Vasectomy does not modify the hormone-secreting capacities,[66] nor does it cause degeneration of the germ cell–producing capacities; the operation is, however, an effective measure for insuring sterility by virtue of preventing egress of spermatozoa.

Thus it becomes evident that the two testicular functions are closely parallel and that practically all conditions that stimulate or depress germ cell formation likewise modify hormone secretion. It is true, however, that sperm formation may precede evidence of hormone secretion in approaching puberty or during the annual period of development. It is also true that hormone can be produced in the absence of germ cell activity, as in cryptorchism, in transplantation of testes, after irradiation of testes and particularly in pathologic adrenal involvement.[67]

From the foregoing discussion it will be appreciated in general (1) that testis hormone is not stored in the body but is rather quickly utilized, broken down or excreted and that (2) if it is to be completely effective it must be maintained in the body in concentrations that will affect the organs with the highest thresholds of response. Since different organs exhibit different thresholds, it is possible to maintain one organ in a functional state and not another.

Effects of Testis Hormone.—The effects of testis hormone in the organism are represented by the differences between castrated and normal males, and since investigators do not yet know all the effects of castration, to that extent they fail to understand the effects of the hormone. In general, the two large categories of effects may be stated as (1) the conditioning of the male organism to show sexual responses to the female and (2) the development and maintenance of the accessory organs of reproduction in a functional state, making possible effective insemination. Brief mention of some particular effects may be in order.

Treatment of embryos in the process of sexual differentiation with pure chemical androgens induces modification in the reproductive system, especially in females. Such modification in mammals has been described for guinea pigs,[68] rats,[69] mice [70] and opossums.[71]

Treatment of prepuberal young males induces precocious development of accessory reproductive organs.

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This follows treatment in amphibia, birds, mammals and even man.

Gonadal hormones from either sex react on the pituitary gland and effectively reduce the amount of gonad-stimulating hormone available to the organism. Castration enhances, and the administration of androgen or of estrogen lowers, the gonad-stimulating effects of the pituitary. Thus testes are probably never active to the full extent of their powers, and this reciprocal interaction between gonad and pituitary secretions appears to be a fundamental element in the regulation of the two glands, hence of the reproductive cycles.

Androgens introduced into castrated males rebuild the accessory organs into a functional state or, if introduced at the time of castration, prevent castration changes from appearing.

The effects of androgens on the normal testicle to a large extent have been found to be harmful, rather than stimulating as was once anticipated. The evidence points to the mechanism of action as an indirect effect on the testes by virtue of a suppressive action on the pituitary, rather than a direct action on the sex glands.[20] It has been found that the harmful influence is absent if either fresh pituitary tissue or gonadotropic agents are supplied. Injurious effects on the testes from the administration of androgens have been reported in rats, dogs, ducks, cocks, guinea pigs and man. On the other hand, it has been pointed out earlier in this paper that androgens, as well as progesterone and yeast extract, exerted a protective action on spermatogenesis immediately following hypophysectomy though none of these substances had a reparative action if administered following damage to the testicles from hypophysectomy.

SUMMARY

The testes function in producing mature spermatozoa and in secreting a hormone that induces mating desire and stimulates the function of accessory reproductive organs; function of the latter insures transfer of spermatozoa to localities in which mature eggs are to be found.

Sperm production in the majority of vertebrates is seasonal, but in many others it is continuous. It appears that pituitary gland function exercises the basic control; hence seasonal influences appear to operate largely through this gland.

The testes are labile organs and easily influenced by a number of different conditions. Whereas many agents or conditions affect both spermatogenesis and the secretion of hormone, the former may be in abeyance while the latter continues.

Naturally secreted testis hormone is believed to be closely similar, if not identical, to testosterone or some compound of it. It is unknown whether testis secretion is the same in different species of vertebrates, but testosterone compounds are androgenic in practically all vertebrate males.

Precocious secretion of testis hormone can be stimulated by the administration of pituitary materials or other gonadotropic substances; hence testes probably never secrete to their full capacity.

Testis hormone is not stored in the body. Its effect is to condition the mating drive and the function of the proper accessory reproductive glands. The rate of its secretion is believed to be controlled by a reciprocal action between it and pituitary secretions.

In the majority of cases studied the injection of androgens into intact males is harmful rather than beneficial to the testes.

Council on Physical Therapy

THE COUNCIL ON PHYSICAL THERAPY HAS AUTHORIZED PUBLICATION OF THE FOLLOWING REPORTS. HOWARD A. CARTER, Secretary.

ABSTRACT OF MINUTES, MEETING OF COUNCIL ON PHYSICAL THERAPY, DEC. 6-7, 1940

The annual meeting of the Council on Physical Therapy was held on Dec. 6 and 7, 1940 at the headquarters of the American Medical Association. The members present were Dr. Harry E. Mock, Chairman, and Drs. Eben J. Carey, Anthony C. Cipollaro, William W. Coblentz, John S. Coulter, Frank D. Dickson, Walter E. Garrey, Frank H. Krusen, Frank R. Ober, Ralph Pemberton and Horatio B. Williams.

RESEARCH

The report of the Committee on Research disclosed that eleven grants in aid of research had been made in 1940. Results of four of the research problems investigated have already been published. The Council members expressed the opinion that the fundamental studies aided by these grants were extremely valuable and that the caliber of the investigators to whom the grants had been made was unusually high.

EDUCATION IN PHYSICAL THERAPY

The Council and the Consultants on Education have carried on an active program of education by means of lectures, exhibits, addresses before medical audiences and writing of informative articles. A detailed report of the activities of each member was presented. The program of education has resulted in a greater interest in physical therapy as evidenced by the increased number of courses in physical therapy that are being given in medical schools and the efficient physical therapy departments functioning in hospitals.

It was voted that a small handbook be prepared under the auspices of the Council. The purpose of this conveniently sized book is to serve as a quick source of information for the intern or practitioner. It was also voted that the Council's present publication, the Handbook of Physical Therapy, be revised.

A report concerning the subcommittee on Physical Therapy of the National Research Council (defense program), on which members of the Council are serving, was made to the Council.

RADIO INTERFERENCE

The problem of radio interference has engaged the attention of the Council for several years. Members of the Council represented the medical profession at a conference held by the Federal Communications Commission in Washington, and a report of the proceedings was made to the Council. Nothing definite was decided at the conference, but it seems evident that the manufacturers of electromedical equipment will be asked to design apparatus so that it will operate on specific frequencies allocated only for this purpose. It was voted that members of the Council shall continue to attend all the meetings on radio interference held by the commission. The Council appreciated the sincere cooperation of the Federal Communications Commission and the manufacturers of electromedical equipment.

THE COUNCIL'S CONSULTANTS

The activities of the Council's Consultants were reported. The Progress Report of the Consultants on Audiometers and Hearing Aids (THE JOURNAL, Sept. 7, 1940, p. 854) disclosed the great activity of that group and the valuable assistance they have rendered the Council. The Consultants on Roentgen Ray Apparatus completed one phase of the work proposed by the Council in the preparation of two informative articles for publication in THE JOURNAL. Tentative requirements for electrocardiographs are being prepared by the Consultants on Electrocardiographs. The Handbook on Amputations, the work of the Consultants on Artificial Limbs, is nearing completion;

three chapters of the book have already appeared in THE JOURNAL.

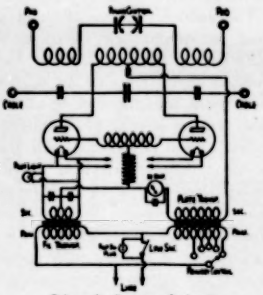
It was voted that a new group of Consultants be formed to assist the Council in considering respirators.

ROSE "THERMION" RADIATHERM ACCEPTABLE

Manufacturer: E. J. Rose Manufacturing Company, 727-733 East Gage Avenue, Los Angeles.

The Rose "Thermion" Radiatherm is used for short wave diathermy. The chassis assembly, which is encased in an individual container, may be removed from the cabinet for portable use. Pads, cuffs and induction cable are supplied as standard equipment; surgical accessories are available. The unit operates on approximately 12 meter wavelength and is equipped with two oscillator tubes number 218 in a self-rectifying circuit.

Rose "Thermion" Radiatherm.



Schematic diagram of circuit.

Application: Cuffs

	(Degrees Fahrenheit) Average of 6 tests		
	Initial	Final	Rise
Skin	94.5	99.7	5.2
Subcutaneous	97.4	106.4	9.0
Muscle	99.1	105.9	6.8
Oral	98.7	99.5	0.8

Application: Cable

	(Degrees Fahrenheit) Average of 6 tests		
	Initial	Final	Rise
Skin	93.1	100.9	7.8
Subcutaneous	97.5	104.1	6.6
Muscle	99.6	105.6	6.0
Oral	98.9	99.5	0.6

The firm submitted evidence to substantiate the efficacy of the apparatus in deep muscle heating. This evidence is as follows:

Six healthy medical students were used for the tests. The right thigh was used in all cases for the first observation, and the experiments were conducted on the right and left thigh alternately. Temperature measurements were made with a thermocouple in the anterior portion of the thigh at depths of (*a*) ¼ inch, (*b*) ¾ inch, (*c*) 2 inches or on the bone. These depths were measured from skin straight in—that is, normal to the surface of the skin.

In applying the inductive cable, approximately 1½ inches of bath toweling was wrapped around the thigh and it was held in place by approximately four wraps of the cable.

The Council used the unit clinically and found that it gave satisfactory clinical service.

In order to determine the transformer temperature rise and the power output, the unit was tested in a laboratory acceptable to the Council. The results of these tests are as follows:

1. The final transformer temperature by the resistance method (within the limits of safety prescribed by the Council) was 96.3 C.
2. The output was 400 watts.

The Council on Physical Therapy voted to accept the Rose "Thermion" Radiatherm for inclusion on its list of accepted devices.

RADIO-EAR JUNIOR 41 ELECTRONIC HEARING AID ACCEPTABLE

Manufacturer: E. A. Myers and Sons, Inc., 306-308 Beverly Road, Mount Lebanon, Pittsburgh.

The Radio-Ear Junior 41 Electronic Hearing Aid consists of the following parts:

(*a*) Combined microphone and vacuum tube amplifier unit M-5028 with volume control switch and battery "economizer" are incorporated in this unit. The latter has two positions marked "battery new" and "battery used," designed to reduce the current drain on new batteries giving full voltage. The microphone amplifier unit is 3¼ by 1¾ by ⅝ inches and weighs 83 Gm.

(*b*) A and B batteries in soft leather case. The over-all dimensions of the latter are 3¼ by 3⅛ inches and the combined weight is 238 Gm. The A battery is a Burgess No. 1-E. S. 1.5 volts cell carried in a clip container. The B battery is a special 30 volt unit. Connections are made by means of a three prong plug connector.

(*c*) Air conduction crystal receiver C-5184, 9/16 inch thick by 1 inch diameter, fitted with molded earpiece. Combined weight of receiver and earpiece is 9 Gm.

The Council's investigation of the instrument revealed that:

Battery Drain.—With a new battery the currents drawn are as shown in table 1. The figures justify the manufacturer's claim for battery economy due to this feature.

TABLE 1.—*Currents with New Battery*

Battery	Economizer Position	Voltage	Current
A	Battery used	1.5	65.0 ma.
B	Battery used	30.0	1.0 ma.
A	Battery new	1.5	55.0 ma.
B	Battery new	30.0	0.83 ma.

Mechanical Features.—The instrument is substantially made and neat in appearance. Internal noise is not excessive. With a well fitted earpiece the instrument can be used to practically full volume without "feedback squeals." The tone control on the back of the microphone unit provides for three possible adjustments of the frequency response. This adjustment is made permanently by turning a screw set in the case to one of those positions marked by white, blue and red dots respectively. The performance tests were made with the tone control in the white dot position, which according to the manufacturer accentuates the high frequency response.

Radio-Ear Junior 41 Electronic Hearing Aid.

Performance tests were made with "economizer" set in used battery position.

Amplification.—The over-all amplifications at different frequencies given in table 2 were shown at full volume.

TABLE 2.—*Amplifications at Different Frequencies*

	128	256	512	1,024	2,048	4,096
At normal ear threshold	nil	nil	18	38	35	nil
At approximately 45 db above normal threshold	2	7	17	33	32	nil

The Council voted to accept the Radio-Ear Junior 41 Electronic Hearing Aid for inclusion on its list of accepted devices.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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SATURDAY, APRIL 12, 1941

THE VERDICT

The jury in the case in which the United States Government brought suit on criminal charges in a conspiracy against four medical associations and twenty-one individual defendants brought in its verdict at 11 p. m. on April 4. When the prosecution had completed presentation of its evidence, Justice Proctor directed the jury to acquit the Harris County Medical Society, the Washington Academy of Surgery and two of the individual defendants. One of the individual defendants, Dr. Groover, died before the case came to trial. The final decision of the jury found the American Medical Association and the District of Columbia Medical Society guilty and declared all of the individual defendants not guilty.

Newspapers, radio commentators and many others at once expressed confusion in endeavoring to understand this verdict. This confusion arose because five members of the staff of the American Medical Association, including the Secretary, the only ones connected by the prosecution with this case, were declared by the jury to be innocent of the charges, yet the organization itself was found guilty. Likewise the verdict found the defendant officials and members of the various committees of the District of Columbia Medical Society to be innocent, and yet the organization itself to be guilty. The attorneys for the American Medical Association and the District of Columbia Medical Society are undertaking at once legal procedure toward setting aside this verdict and toward making a suitable motion to appeal.

The instructions given to the jury by Justice Proctor, which are published in this issue of THE JOURNAL (p. 1700) should be of interest to every physician. They state succinctly the extent to which the activities of the American Medical Association in carrying on its affairs, in raising the standards of medical colleges and hospitals by inspection and approval or disapproval, in the publication of facts regarding medical activities, and in the maintaining of the Principles of Medical Ethics fall within the bounds of legal conduct.

CHEMOTHERAPY IN SUBACUTE BACTERIAL ENDOCARDITIS

Bacterial endocarditis has always been considered a fatal disease, although occasional spontaneous recovery has undoubtedly occurred. Libman cited 10 cases with positive blood cultures in which recovery had taken place. Capps, in a review of 139 cases, reported 11 in which survival continued for more than five years. He had not, however, seen a single recovery since 1924, which might suggest that there exists a variability in the virulence of causative organisms from year to year.

The discovery of the effect of sulfonamide derivatives on streptococcic infections naturally suggested their trial in cases of subacute bacterial endocarditis. Manson-Bahr [1] reported an apparent cure from the intravenous administration of azosulfamide in 2 typical cases without positive blood cultures. In a case with a typical clinical picture and with Streptococcus viridans in blood cultures, Heyman [2] used sulfanilamide and reported recovery of eighteen months' duration at the time of his report. Whitby [3] observed a favorable effect from sulfanilamides on the fever and the general condition of 3 patients with subacute bacterial endocarditis and positive Streptococcus viridans blood cultures. The effect, however, was only temporary. Major and Leger [4] reported recovery in a case in which there had been valvular lesions, petechiae, splinter hemorrhages, fever, splenomegaly and positive Streptococcus viridans blood cultures. Unfortunately death occurred one month later from congestive heart failure. Necropsy showed the evidence of a recent endocarditis in the stage of healing and repair. Spink and Crago [5] employed sulfanilamide therapy in 12 cases and noted a beneficial effect in 2. The drug did not affect the course of the remaining 10. Sulfanilamide rendered the blood sterile in 6 cases. This effect was only temporary except in 2. There was no definite relation between the amount of free sulfanilamide in the blood and the effect of the drug on the bacteria. These physicians express the opinion that sulfanilamide therapy is of doubtful value in bacterial endocarditis because of the nature of the focus of infection. The proliferating mass of bacteria situated beneath the surface of vegetation is probably protected at least in part from the action of free sulfanilamide in the blood as well as from specific antibodies. Major [6] treated 7 cases with sulfanilamide and was able to report an apparent

1. Manson-Bahr, Philip: Apparent Cure of Two Cases of Infective Endocarditis by Intravenous Chemotherapy, Practitioner **141**: 221 (Aug.) 1938.

2. Heyman, Jacob: Subacute Bacterial Endocarditis Successfully Treated with Sulfanilamide, J. A. M. A. **114**: 2373 (June 15) 1940.

3. Whitby, L. E. H.: Chemotherapy of Bacterial Infections, Lancet **2**: 1095 (Nov. 12) 1938.

4. Major, R. H., and Leger, L. H.: Recovery from Subacute Infectious Endocarditis Following Prontosil Therapy, J. A. M. A. **111**: 1919 (Nov. 19) 1938.

5. Spink, W. W., and Crago, F. H.: Evaluation of Sulfanilamide in the Treatment of Patients with Subacute Bacterial Endocarditis, Arch. Int. Med. **64**: 228 (Aug.) 1939.

6. Major, R. H.: The Effect of Sulfanilamide Compounds on Endocarditis, Am. J. M. Sc. **199**: 739 (June) 1940.

recovery in 3. Andrews likewise reports recovery in a typical case treated with sulfapyridine.

Critical analysis of the reported cases would seem to indicate that sulfanilamide and, even more, sulfapyridine is capable of lowering the temperature and sterilizing the blood in cases of subacute bacterial endocarditis but that these effects are quickly lost. These results are disappointing, since the blood of animals with experimental bacterial endocarditis as well as that of human beings with the disease shows a high titer of antibodies for the organisms. Moreover, the bacteria die quickly in the serum in the presence of leukocytes. The explanation would seem to be found in the nature of the lesion. The constant deposition of fibrin and platelets on the vegetations protects the organisms from the effect of the circulating blood or of any drug introduced into the blood.

The ingenious idea of combining the bacteriostatic effect of sulfapyridine with the anticoagulant effect of heparin appealed to a number of clinicians. The work of Best and his associates has made available a purified heparin which can be given intravenously to man in amounts rich enough to prolong greatly the clotting time of blood. It was believed that heparinization would prevent further deposition of fresh blood clots on the vegetations and thus enable the drug to produce its effect on the organisms. Kelson and White [7] gave 10 cc. of heparin (10,000 units) in 500 cc. of physiologic solution of sodium chloride by uninterrupted intravenous drip day and night for fourteen days. The rate of flow was regulated to maintain the venous clotting time at approximately one hour. From 4 to 6 Gm. of sulfapyridine was given daily by mouth before and during the use of heparin and for one week afterward. Other therapeutic measures consisted of blood transfusions and administration of ascorbic acid by mouth. Of the 7 patients thus treated 3 could not tolerate heparin for more than an hour and a half because of reactions to a toxic lot of the drug. Two other patients could tolerate it for only three days and two days respectively because of the grave general state, which terminated fatally within a short time. The remaining 3 patients were able to take heparin for more than a week. All 3 showed striking improvement and were reported free from evidences of the disease for nineteen, eighteen and four weeks respectively. Friedman, Hamburger and Katz [8] were compelled on the tenth day to discontinue the administration of heparin to a patient because of projectile vomiting. The patient died the same day and the necropsy revealed encephalomalacia, hemorrhage into the ventricles and disseminated glomerulonephritis. Fletcher [9] and Witts [10] each report a case in which death occurred from cerebral hemorrhage as the result of the combined treatment with heparin and sulfapyridine. Apparently then the use of heparin by interfering with the physiologic process of clotting is associated with the danger of vascular accidents which may prove fatal. Other possible disadvantages, as pointed out by Friedman, Hamburger and Katz, are to be seen in the sudden liberation of large quantities of bacteria, should the vegetation disintegrate, with the resulting overwhelming bacteremia. The acute glomerulonephritis reported by several observers may have been conceivably caused by the heparin. However, in view of the generally hopeless prognosis in bacterial endocarditis the methods investigated are warranted for further study and may be distinct advances in our progress toward a solution of the problem of controlling this disease.

7. Kelson, S. R., and White, P. D.: A New Method of Treatment of Subacute Bacterial Endocarditis, J. A. M. A. **113**: 1700 (Nov. 4) 1939.

8. Friedman, Meyer; Hamburger, W. W., and Katz, L. N.: Use of Heparin in Subacute Bacterial Endocarditis, J. A. M. A. **113**: 1702 (Nov. 4) 1939.

9. Fletcher, C. M.: Subacute Bacterial Endocarditis Treated with Sulfapyridine and Heparin, Lancet **2**: 512 (Oct. 26) 1940.

10. Witts, L. J.: Heparin in Subacute Bacterial Endocarditis, Brit. M. J. **1**: 484 (March 23) 1940.

NEONATAL IMMUNITY

The sudden increase in prenatal immunity at the time of birth, currently reported by Woolpert and his co-workers [1] of Ohio State University, challenges conventional concepts of immunology. The mammalian fetus is more susceptible to pathogenic micro-organisms than the postnatal animal of the same species. This has been adequately demonstrated by prenatal injections of vaccinia virus,[2] herpes virus and the virus of human influenza.[3] Newborn young and mature guinea pigs, for example, are both insusceptible to the latter virus. Relatively large doses of influenza virus may be injected intracerebrally without the production of recognizable lesions or symptoms. When injected intracerebrally through the maternal abdominal wall into half grown or full grown fetuses, however, the same virus leads to a widespread dissemination and multiplication of the virus throughout the fetal tissues. Intranasal mouse titrations show that the virus reaches its maximum concentration in the fetal lungs, liver and kidneys by the sixth day, whereas little or no virus is demonstrable in the brain, placenta or blood stream. Fetal death is occasionally observed by the sixth day. Spontaneous recovery, however, is the rule, the fetal tissues usually becoming sterile by the tenth day. Titrations of the tenth day fetal blood almost invariably show specific neutralizing antibodies, usually in greater concentration than in the maternal blood. This strongly suggests that the fetal antibodies are not of maternal origin.

Woolpert's most sensational result, however, is the information obtained by intracerebral injection of full

1. Dettwiler, H. A.; Hudson, N. P., and Woolpert, O. C.: The Comparative Susceptibility of Fetal and Postnatal Guinea Pigs to the Virus of Epidemic Influenza, J. Exper. Med. **72**: 623 (Dec.) 1940.

2. Stritar, Joseph, and Hudson, N. P.: Susceptibility of the Guinea Pig Fetus to Vaccinia, Am. J. Path. **12**: 165 (March) 1936.

3. Woolpert, O. C.; Gallagher, F. W.; Rubenstein, Leona, and Hudson, N. P.: Propagation of the Virus of Influenza in the Guinea Pig Fetus, J. Exper. Med. **68**: 313 (Sept.) 1938.

term guinea pig fetuses shortly before normal or artificial birth. If the injection is made within eighteen hours before such birth, virus is not detectable in the neonatal brain, lungs, liver or kidneys. Apparently at birth fetal susceptibility is changed to an adequate virucidal immunity, approximately equal to that of the adult guinea pig.

Woolpert and his co-workers have no theory to account for this neonatal increase in microbic resistance except their belief that in some unknown way this immunity must be associated with postnatal respiratory and circulatory readjustments. Determination of the mechanism of neonatal immunity may eventually lead to practical therapeutic methods.

Current Comment

SULFATHIAZOLE CONTAMINATED WITH PHENOBARBITAL

From various portions of the United States, records continue to accumulate of human beings who suffered either death or injury from the use of the tablets of sulfathiazole which were contaminated with phenobarbital and which were manufactured by the Winthrop Chemical Company and distributed with the series designation MP and a subsequent figure. In its latest warning to hospitals and to the medical profession, the Winthrop Chemical Company says:

Please examine the mark on every package of our sulfathiazole tablets and return to us immediately for exchange any package marked with the letters MP. If you have dispensed tablets from bottles bearing these control letters, will you kindly endeavor to recover all such tablets which have not been consumed.

The communities from which have come reports of some seventeen deaths which may have been attributable to the use of contaminated tablets include Allentown, Pa.; Lincoln, Neb.; Farmington, Mo.; Norristown, Pa.; Worcester, Mass.; Palmerton, Pa.; Edenton, N. C.; New Orleans; Louisville; Philadelphia; Tyler, Texas, and Clear Field, Pa. Report of injuries come from a widely distributed series of communities, including primarily places in Massachusetts, Pennsylvania, Kentucky and Missouri. Obviously it is difficult for a physician to determine whether or not deaths resulting from severe cases of pneumonia or similar serious infections were primarily due to the contaminated drug or to the severity of the condition. For that very reason the American Medical Association, through the Council on Pharmacy and Chemistry, is endeavoring to secure actual case histories of incidents in which fatality occurred so that from an analysis of the group as a whole it may be possible to determine more definitely the part played by the contamination in the symptomatology that developed in these patients. No doubt the Food and Drug Administration, which has already issued an official statement on the subject and which has stimulated a great number of inspectors to make first-hand studies of such cases and to secure the return of all of the drug still extant, will eventually make available its own official report on this incident. At this time again every physician is warned to make at once a personal investigation of all sulfathiazole, Winthrop, which he has on hand or which he may have prescribed for his own patients since December, with a view to securing any of the material labeled with the MP designation and returning it preferably to the Food and Drug Administration officials for their study.

DOCTORS ON THE AIR

Interest in health education by radio is constantly increasing. New arrangements for radio programs have been announced by the medical societies of California [1] and of New York.[2] In California the state medical society plans simultaneous broadcasting of identical material over ten local radio stations in various parts of the state. In New York the bureau of public relations has issued a special bulletin [2] designated as "an educational program about educational programs." This bulletin is in the form of a fictitious program in which educators, doctors and radio station representatives participate. The bulletin is based on a questionnaire about radio health talks sent by the bureau of public relations of the Medical Society of the State of New York to radio stations in the United States and an analysis of the three hundred and seventy-six replies received. The questionnaire was accompanied by a typical radio health talk. Of the radio stations eighty-two rated the talk high, one hundred and forty-two medium and forty-nine low. The questionnaire also developed that the substance material in the talk was high; its form of presentation was responsible for its low rating. The questionnaire disclosed that the radio stations prefer good dramatized programs to any other form but are not interested in mediocre efforts at dramatization. The round table and the interview are preferred over the simple talk, but it is conceded that simple talks will of necessity be the most common health presentations on the radio for many years to come. They should therefore be studied and improved. Radio stations insist that the doctors who broadcast must learn to be good speakers and to speak "in plain language without too much technical camouflage." While radio stations continue to present programs of health talks because they are in the public interest, they do so with small enthusiasm because speakers provided by medical societies are not usually good speakers. Doctors do not prepare for radio broadcasting with sufficient seriousness; they fail to rehearse their talks and to time them carefully. Another objection raised by the radio stations is the reluctance of medical societies to allow doctors' names to be used; the radio audience wants to know to whom it is listening. Health broadcasting faces abundant competition from commercial shows offering entertainment. Several directors of radio stations stated that such programs as Your Health, Medicine in the News and Doctors at Work, broadcast by the American Medical Association and the National Broadcasting Company, are examples of radio health broadcasting which overcome the reluctance of most persons to be educated.

1. Unpublished communication to Bureau of Health Education, American Medical Association.
2. The Doctor Takes to the Air, Public Relations Bureau, Medical Society of the State of New York, Bull. 34, Dec. 10, 1940.

MEDICAL PREPAREDNESS

In this section of The Journal each week will appear official notices by the Committee on Medical Preparedness of the American Medical Association, announcements by the Surgeon Generals of the Army, Navy and Public Health Service, and other governmental agencies dealing with medical preparedness, and such other information and announcements as will be useful to the medical profession.

ARMY RESERVE OFFICERS ORDERED TO ACTIVE DUTY

SECOND CORPS AREA

The following additional medical reserve corps officers have been ordered to active duty by the Commanding General, Second Corps Area, which comprises the states of New York, New Jersey and Delaware:

ABRAMS, Alfred L., 1st Lieut., Elmhurst, L. I., N. Y., Fort Bragg, N. C.
ALPREN, Bernard F., 1st Lieut., Paterson, N. J., Fort McClellan, Ala.
ALTMAN, Harold, 1st Lieut., New York, Camp Livingston, La.
AMSTER, Joseph J., 1st Lieut., Brooklyn, Camp Livingston, La.
ARTSIS, Nathan, 1st Lieut., Bellmore, L. I., N. Y., Camp Livingston, La.
BADLER, Leon, 1st Lieut., New York, Camp Livingston, La.
BAER, Bernhard, 1st Lieut., Yonkers, N. Y., Camp Blanding, Fla.
BAJOHR, Albert J., 1st Lieut., Flushing, N. Y., Camp Blanding, Fla.
BARNETT, Theodore, 1st Lieut., Brooklyn, Camp Blanding, Fla.
BELL, Murray F., 1st Lieut., Forest Hills, N. Y., Fort Wadsworth, N. Y.
BERESTON, Eugene S., 1st Lieut., New York, Fort Bragg, N. C.
BERKOWITZ, Carl, 1st Lieut., New York, Fort Bragg, N. C.
BERNSTEIN, Sidney A., 1st Lieut., Brooklyn, Fort Bragg, N. C.
BIGLIANI, Urban R., 1st Lieut., North Bergen, N. J., Fort Bragg, N. C.
BLITZMAN, Louis, 1st Lieut., New York, Fort Bragg, N. C.
BLUMENFELD, Emanuel, 1st Lieut., New York, Fort Bragg, N. C.
BOEHM, Walter Edward, 1st Lieut., New York, Fort Bragg, N. C.
BONANNO, Joseph U., 1st Lieut., New York, Fort Bragg, N. C.
BOTTALICO, Michael A., 1st Lieut., New York, Fort Bragg, N. C.
BOWER, David S., Captain, Flushing, L. I., N. Y., Fort Bragg, N. C.
BRANON, Mark E., 1st Lieut., Rutherford, N. J., Fort Adams, R. I.
BRESSLER, Sydney, 1st Lieut., New York, Fort Bragg, N. C.
BRILL, Norman Q., 1st Lieut., New York, Fort Bragg, N. C.
BROAD, Monroe M., 1st Lieut., Jamaica, L. I., N. Y., Fort Bragg, N. C.
BRODERICK, Thomas C., 1st Lieut., Yonkers, N. Y., Fort Bragg, N. C.
CASSARA, Thomas, 1st Lieut., Thiells, N. Y., Fort Totten, N. Y.
CASSELL, Max, 1st Lieut., Philadelphia, Fort Dix, N. J.
CHAMBERLAIN, George E., 1st Lieut., New York, Fort Bragg, N. C.
CHESNICK, Reuben B., 1st Lieut., Oaklyn Manor, N. J., Camp Davis, N. C.
CITTA, James P., 1st Lieut., Toms River, N. J., Casey Jones School, Newark, N. J.
CLEMENTE, Louis J., Captain, Brooklyn, Fort Bragg, N. C.
CONNORS, David A., 1st Lieut., Richmond Hill, N. Y., Fort Dix, N. J.
CREMONA, Vincent M., 1st Lieut., New York, Camp Croft, S. C.
CUSICK, Joseph, Captain, Binghamton, N. Y., Fort Monmouth, N. J.
DAVIDSON, Douglas T., Jr., 1st Lieut., Claymont, Del., Fort DuPont, Del.
DAVIDSON, Sidney, Captain, Larchmont, N. Y., Mitchel Field, N. Y.
DAVISON, Bernard S., 1st Lieut., Brooklyn, Pine Camp, N. Y.
DE LORENZO, Francis C., 1st Lieut., East Orange, N. J. Fort Bragg, N. C.
DICKES, Robert, 1st Lieut., New York, Camp Croft, S. C.
DOONEIEF, Albert S., 1st Lieut., Brooklyn, Camp Davis, N. C.
DOUGHERTY, Daniel V., 1st Lieut., Homer, N. Y., Fort Monmouth, N. J.
ENGLISH, Harrison F., III, 1st Lieut., Trenton, N. J., Carlisle Barracks, Pa.
FERARU, Felix, 1st Lieut., Lynbrook, N. Y., Fort Benning, Ga.
FINEGOLD, John, 1st Lieut., Niagara Falls, N. Y., Camp Croft, S. C.
FORMAN, Everett W., 1st Lieut., New York, Fort Benning, Ga.
FRIEDMANN, Gustav, 1st Lieut., Scotch Plains, N. J., Camp Forrest, Tenn.
GALLO, Frank A. R., 1st Lieut., Brooklyn, Fort Benning, Ga.
GOLD, Edwin M., 1st Lieut., Brooklyn, Camp Blanding, Fla.
GORE, Ira, 1st Lieut., Brooklyn, Fort Benning, Ga.
GRAUBARD, David J., 1st Lieut., New York, Fort Dix, N. J.
HEEVE, William Lester, 1st Lieut., Brooklyn, Pine Camp, N. Y.
HEFTER, Maxwell S., 1st Lieut., Spring Valley, N. Y., Fort Benning, Ga.
HOLLEB, Eugene M., 1st Lieut., Brooklyn, Pine Camp, N. Y.
IANACONE, John A., 1st Lieut., Paterson, N. J., Fort Monmouth, N. J.
ISAACS, Ivan, 1st Lieut., Brooklyn, Camp Forrest, Tenn.
JUCHLI, Rene H., Captain, Amsterdam, N. Y., West Point, N. Y.
KANE, Louis J., 1st Lieut., Brooklyn, Fort Jackson, S. C.
KANSES, Edmund S., 1st Lieut., Rumson, N. J., Fort Jackson, S. C.
KIBBE, Milton H., 1st Lieut., Plainfield, N. J., Fort Benning, Ga.
KINNE, Harvey S., 1st Lieut., Cortland, N. Y., Fort Jackson, S. C.
KOPLIN, Abraham H., 1st Lieut., Trenton, N. J., Fort Jackson, S. C.
KUTTE, George B., 1st Lieut., Morris Plains, N. J., Pine Camp, N. Y.
LAMBERTA, Frank, 1st Lieut., Brooklyn, Fort Dix, N. Y.
LAMPERT, Norman J., 1st Lieut., Brooklyn, Camp Blanding, Fla.
LANG, Leonard C., 1st Lieut., Buffalo, Fort Jackson, S. C.
La RAJA, Raymond J., 1st Lieut., Brooklyn, Camp Forrest, Tenn.
MACALUSO, Dominic C., 1st Lieut., Belleville, N. J., Fort Monmouth, N. J.
MARANGONI, Bruno A., 1st Lieut., New York, Port McClellan, Ala.
MARKS, Bertram E., 1st Lieut., Brooklyn, Fort Barrancas, Fla.
MARSHALL, Louis E., 1st Lieut., Brooklyn, Pine Camp, N. Y.
MOORE, Dean C., 1st Lieut., East Orange, N. J., Fort Bragg, N. C.
MOORE, William H., 1st Lieut., Saratoga Springs, N. Y., Fort Jackson, S. C.
OATMAN, Jack G., 1st Lieut., Greystone, N. J., Fort Bragg, N. C.
ORENSTEIN, Leo, 1st Lieut., New York, Fort Benning, Ga.
PAUL, Abraham, 1st Lieut., Atlantic City, N. J., Carlisle Barracks, Pa.
PINO, Anthony, 1st Lieut., Bridgeton, N. J., Fort Jackson, S. C.
PROVISOR, Benjamin, 1st Lieut., Passaic, N. J., Fort Monmouth, N. J.
RINER, Edward D., 1st Lieut., New York, Pine Camp, N. Y.
SARAJIAN, Aram M., 1st Lieut., West Englewood, N. J., Camp Livingston, La.
SAXE, David H., 1st Lieut., Passaic, N. J., Fort Bragg, N. C.
SCHWAB, George F., 1st Lieut., Union City, N. J., Fort Benning, Ga.
SPENCER, Gordon A., 1st Lieut., Valhalla, N. Y., Camp Claiborne, La.
STARR, Eli, 1st Lieut., Brooklyn, Fort Jackson, S. C.
STEPHENSON, Charles R., 1st Lieut., Endicott, N. Y., Pine Camp, N. Y.
TOMLINS, Francis I., 1st Lieut., Ridgewood, N. J., Fort Jackson, S. C.
VAN MARTER, James H., Major, Groton, N. Y., 2d Corps Area Recruiting Office, New York.
VERDON, Robert B., 1st Lieut., Bergenfield, N. J., Fort Bragg, N. C.
WEILL, David R., Jr., 1st Lieut., New York, Pine Camp, N. Y.
WENTZELL, James E., 1st Lieut., Wenonah, N. J., Camp Livingston, La.
WOLFSON, Irving, Captain, Buffalo, Fort Jackson, S. C.
YONTEF, Reuben, 1st Lieut., Bayonne, N. J., Fort Jackson, S. C.

CORRECTION

Major Gross.—In the list of reserve officers ordered to active duty under the Second Corps Area in THE JOURNAL, March 15, page 1148, Herbert F. Gross was listed as a first lieutenant when he should have been listed as major.

THIRD CORPS AREA

The following additional medical reserve corps officers have been ordered to extended active duty by the Commanding General, Third Corps Area, which comprises the states of Pennsylvania, Virginia, District of Columbia and Maryland:

ACTON, Conrad Berens, Captain, Baltimore, Fort Belvoir, Va.
BARKER, Joseph Michael, 1st Lieut., Washington, D. C., Camp Lee, Va.
BRADLEY, David Vernard, 1st Lieut., Philadelphia, Camp Livingston, La.
BULFAMONTE, Joseph Charles, 1st Lieut., Shamokin, Pa., Fort George G. Meade, Md.
CLAYTOR, Frank William, 1st Lieut., Roanoke, Va., Fort Bragg, N. C.
CLAYTOR, John Bunyan, Jr., 1st Lieut., Roanoke, Va., Camp Livingston, La.
CORFF, Meyer, Major, Philadelphia, Fort Story, Va.
DYSON, John Milnes, 1st Lieut., Hazleton, Pa., Fort Story, Va.
FITZPATRICK, Hamilton Douglas, 1st Lieut., East Radford, Va., Fort Monroe, Va.
HILL, Paul Swanson, Captain, Harrisonburg, Va., Fort Eustis, Va.
HINKSON, DeHaven, Major, Philadelphia, Fort Bragg, N. C.
McKEE, Carlisle Emerson, Jr., 1st Lieut., Pittsburgh, Fort Belvoir, Va.
MEDOFF, Joseph, 1st Lieut., Philadelphia, Fort Eustis, Va.
MENDELSOHN, Matthew, 1st Lieut., Washington, D. C., Fort George G. Meade, Md.
O'CONNOR, Arthur Joseph, 1st Lieut., Pittsburgh, Fort Monroe, Va.
OLSON, Robert Mortimer, 1st Lieut., Palmyra, Pa., Indiantown Gap Military Reservation, Indiantown Gap, Pa.
RAMSEY, James Penhurst, 1st Lieut., Philadelphia, Fort Bragg, N. C.
SCHNEIDER, Henry Conrad, 1st Lieut., Philadelphia, 28th Division, Indiantown Gap Military Reservation, Indiantown Gap, Pa.
SCHULTZ, Edward Joseph, Captain, Claysburg, Pa., 28th Division, Indiantown Gap Military Reservation, Indiantown Gap, Pa.
SICA, Paul Anthony, 1st Lieut., Pittsburgh, Fort Belvoir, Va.
SMITH, Forrest Fullerton, Captain, Hallstead, Pa., 28th Division, Indiantown Gap Military Reservation, Indiantown Gap, Pa.
SNEDDON, John, Jr., 1st Lieut., Hanover, Pa., Camp Lee, Va.
STAPINSKI, Stanley Michael, 1st Lieut., Glenn Lyon, Pa., Camp Lee, Va.

FOURTH CORPS AREA

The following additional medical reserve corps officers have been ordered to active duty by the Commanding General, Fourth Corps Area, which comprises the states of Tennessee, North Carolina, South Carolina, Alabama, Georgia, Mississippi, Florida and Louisiana:

ALLEN, Benjamin L., 1st Lieut., Spartanburg, S. C., Fort Benning, Ga.
CROWDER, Miles S., Captain, Jefferson City, Tenn., Fort Benning, Ga.
JOHNSON, Wince A. J., 1st Lieut., Lakeland, Fla., Camp Livingston, La.
MANLY, John B., 1st Lieut., Tuskegee, Ala., Fort Bragg, N. C.
MIZELL, Von D., 1st Lieut., Fort Lauderdale, Fla., Camp Livingston, La.
TERRENCE, August C., 1st Lieut., Opelousas, La., Camp Livingston, La.

Orders Revoked

CHAMBLEE, John S., 1st Lieut., Windsor, N. C.
CRICHLOW, Richard S., Lieut. Col., New Orleans.
DOTSON, Walter S., Jr., 1st Lieut., Westmoreland, Tenn.
FAISON, Thomas G., Captain, Winton, N. C.
FERBER, Leon, 1st Lieut., Nashville, Tenn.
HENRY, Jennings I., 1st Lieut., Atlanta, Ga.
HESTER, Marion W., Captain, Atlanta, Ga.
LEVY, Louis, Major, Memphis, Tenn.
MAYS, John R. S., Captain, Macon, Ga.
WHITEHEAD, Clarence M., 1st Lieut., Greenville, Ga.
WISE, Robert A., 1st Lieut., Chattanooga, Tenn.

SIXTH CORPS AREA

The following additional medical reserve corps officers have been ordered to extended active duty by the Commanding General, Sixth Corps Area, which comprises the states of Wisconsin, Illinois and Michigan:

ANDERSON, E. Gilbert, 1st Lieut., Rockford, Ill., 30th Division, Fort Jackson, S. C.
ASHLEY, Richard W., 1st Lieut., Kenosha, Wis., Station Hospital, Fort Sam Houston, Texas.
BALDWIN, Raymond M., 1st Lieut., Beloit, Wis., Station Hospital, Fort Sill, Okla.
BLAIR, Thomas H., 1st Lieut., Ann Arbor, Mich., Station Hospital, Fort Custer, Mich.
BOERSMA, Donald, 1st Lieut., Chicago, Station Hospital, Fort Bliss, Texas.
EISENSTEIN, Harold, Captain, Chicago, Station Hospital, Fort Bliss, Texas.
EISENSTEIN, Milton W., Captain, Chicago, Station Hospital, Fort Bliss, Texas.
FARA, Frank J., 1st Lieut., Berwyn, Ill., Station Hospital, Fort Bliss, Texas.
FARHAT, Maynard M., 1st Lieut., Flint, Mich., Station Hospital, Fort Sill, Okla.
FREE, Harry W., 1st Lieut., Detroit, 12th Cavalry, Fort Brown, Texas.
HEINRICH, Jerome F., 1st Lieut., Chicago, Station Hospital, Camp Grant, Ill.
HUBERT, John R., 1st Lieut., Pontiac, Mich., Station Hospital, Fort Sill, Okla.
HYMAN, Samuel J., 1st Lieut., Inkster, Mich., 32d Division, Camp Beauregard, La.
JANA, Joseph T., Jr., 1st Lieut., Berwyn, Ill., 11th Station Hospital, Fort Custer, Mich.
JOHNSON, Paul T., 1st Lieut., Rockford, Ill., 32d Division, Camp Beauregard, La.
KETTERER, Walter R., 1st Lieut., Greenville, Ill., 27th Division, Fort McClellan, Ala.
KONOPA, John F., 1st Lieut., Manistee, Mich., Station Hospital, Fort Custer, Mich.
KRAM, David D., 1st Lieut., Chicago, Station Hospital, Chanute Field, Ill.
LEAVITT, Samuel S., 1st Lieut., Orland Park, Ill., 5th Division, Fort Custer, Mich.
LOVE, Loren L., 1st Lieut., Christopher, Ill., Station Hospital, Fort Sill, Okla.
MacALPINE, Orville D., 1st Lieut., Saginaw, Mich., Station Hospital, Chanute Field, Ill.
McBEAN, James B., 1st Lieut., Chicago, Station Hospital, Fort Sill, Okla.
McDOWELL, Mordecai M., 1st Lieut., Danville, Ill., Station Hospital, Fort Sam Houston, Texas.
SEAFORTH, Edward A., 1st Lieut., Perkinstown, Wis., Station Hospital, Fort Sam Houston, Texas.
SUTTON, Charles F., 1st Lieut., Chillicothe, Ill., Station Hospital, Fort Sam Houston, Texas.
VEDNER, Joseph H., 1st Lieut., Menomonie, Wis., 30th Division, Fort Jackson, S. C.
VERMEREN, Paul C., 1st Lieut., Chicago, Station Hospital, Selfridge Field, Mich.
WEINBERG, Charles M., 1st Lieut., Maywood, Ill., Station Hospital, Fort Sill, Okla.
WIEN, Norman A., 1st Lieut., Chicago, Station Hospital, Fort Bliss, Texas.

SEVENTH CORPS AREA

The following additional medical reserve corps officers have been ordered to extended active duty by the Commanding General, Seventh Corps Area, which comprises the states of North Dakota, South Dakota, Minnesota, Nebraska, Iowa, Kansas, Missouri, Arkansas and Wyoming:

ANDREW, Earl Vernon, Captain, Maquoketa, Iowa, Fort Knox, Ky.
BISHOP, James Frederick, 1st Lieut., Davenport, Iowa, Fort Francis E. Warren, Wyo.
BLOEMENDAAL, Gerrit John, 1st Lieut., Ipswich, S. D., Camp J. T. Robinson, Ark.
BUZELLE, Leonard Kinnicutt, 1st Lieut., Minneapolis, Camp J. T. Robinson, Ark.
CAPEL, Havis T., 1st Lieut., Pine Bluff, Ark., Fort Francis E. Warren, Wyo.
CLARK, Orville Richolson, 1st Lieut., Topeka, Kan., Fort Leonard Wood, Mo.
CONNOLLY, William Burton, Captain, Helena, Ark., Camp J. T. Robinson, Ark.
DRASKY, Stanley, Captain, Linwood, Neb., Fort Riley, Kan.
GIOVALE, Silvio Joseph, 1st Lieut., Reliance, Wyo., Pine Camp, N. Y.
GLASER, Leland Forrest, Captain, Springfield, Mo., Fort Leonard Wood, Mo.
GOLDWASSER, Herbert Valentine, Captain, St. Louis, Camp J. T. Robinson, Ark.
GRAHAM, Wallace Harry, 1st Lieut., Kansas City, Mo., Fort Leonard Wood, Mo.
GREENBERG, Maynard Maurice, Captain, Omaha, Fort Leonard Wood, Mo.
HALL, Millard Wilson, Captain, Wichita, Kan., Camp J. T. Robinson, Ark.
HANSEN, Clifford Henry, 1st Lieut., Omaha, Fort Leonard Wood, Mo.
HIGGINS, Joseph Patrick, 1st Lieut., Albion, Neb., Camp J. T. Robinson, Ark.
JOHNSON, Malcolm Rossland, Captain, Red Wing, Minn., Fort Riley, Kan.
LOW, Edward John, 1st Lieut., Mahnomen, Minn., Fort Sam Houston, Texas.
MILSTER, Clyde Rogers, 1st Lieut., St. Louis, Fort Leonard Wood, Mo.
NIXON, Edward Earl, 1st Lieut., Gallatin, Mo., Camp J. T. Robinson, Ark.
PATTON, John Erwin, 1st Lieut., Omaha, Fort Leonard Wood, Mo.
PENDLETON, Raymond Lancing, 1st Lieut., Kansas City, Kan., Camp J. T. Robinson, Ark.
TROTTER, William M., Captain, Maxwell, Iowa, Fort Francis E. Warren, Wyo.
WATKINS, Lucier Andrew, 1st Lieut., Leavenworth, Kan., Fort Leonard Wood, Mo.

Orders Revoked

BARNES, Seth Stevens, 1st Lieut., Cape Girardeau, Mo., Fort Leonard Wood, Mo.
BERGMAN, Harold Hanford, 1st Lieut., Gillette, Wyo., Camp J. T. Robinson, Ark.
DeYOUNG, George Marion, George, Iowa, 1st Lieut., Camp Murray, Wash.
FREIDMAN, Michael, 1st Lieut., St. Louis, Camp J. T. Robinson, Ark.
GARCIA, Charles Leon, Captain, Warrenton, Mo., Camp J. T. Robinson, Ark.
HOOVER, Paul Williams, 1st Lieut., Arkadelphia, Ark., Camp J. T. Robinson, Ark.
KELLING, Douglas George, 1st Lieut., Waverly, Mo., Camp J. T. Robinson, Ark.
MAGNESS, Guy Norton, Captain, University City, Mo., Camp J. T. Robinson, Ark.
McCRAY, Raymond Vaughn, 1st Lieut., Malvern, Ark., Camp J. T. Robinson, Ark.
MOWREY, William Oliver, 1st Lieut., St. Louis, Camp J. T. Robinson, Ark.
REDMOND, James Joseph, 1st Lieut., Cedar Rapids, Iowa, Camp J. T. Robinson, Ark.
ROBROFF, Henry Kenneth, Captain, Elbowoods, N. D., Fort Riley, Kan.
SHERIDAN, Edmund Reid, 1st Lieut., St. Louis, Camp J. T. Robinson, Ark.
SMITH, Clifford Lemar, 1st Lieut., Buffalo, Wyo., Camp J. T. Robinson, Ark.
VIRANT, John Aloysius, 1st Lieut., St. Louis, Camp J. T. Robinson, Ark.

EIGHTH CORPS AREA

The following additional medical reserve corps officers have been ordered to active duty by the Commanding General, Eighth Corps Area, which comprises the states of Colorado, Arizona, New Mexico, Oklahoma and Texas:

ARNIM, Landon C., 1st Lieut., Corpus Christi, Texas, 2d Division, Fort Sam Houston, Texas.
BICKLEY, Estill Truett, 1st Lieut., Corpus Christi, Texas, 20th Coast Artillery, Fort Crockett, Texas.
CHAFFIN, Zale, 1st Lieut., Oklahoma City, 36th Division, Camp Bowie, Texas.
CINNAMON, Alfred Morris, 1st Lieut., Dallas, Texas, 45th Division, Camp Barkeley, Texas.
CLARK, Ralph O., 1st Lieut., Oklahoma City, 45th Division, Camp Barkeley, Texas.
COGBURN, Charles C., 1st Lieut., Nixon, Texas, 36th Division, Camp Bowie, Texas.
GIPSON, Carle D., 1st Lieut., Three Rivers, Texas, 2d Division, Fort Sam Houston, Texas.
HAMME, Ralph Eugene, 1st Lieut., Edinburg, Texas, 2d Division, Fort Sam Houston, Texas.
HOWELL, Ira Leo, 1st Lieut., White Plains, N. Y., 8th Calvary, Fort Bliss, Texas.
IVY, J. B., 1st Lieut., Weslaco, Texas, 2d Division, Fort Sam Houston, Texas.
JERMSTAD, Robert J., 1st Lieut., Fort Worth, Texas, Station Hospital, Fort Sam Houston, Texas.
MAXFIELD, James Robert, Captain, Albuquerque, N. M., Station Hospital, Fort Bliss, Texas.
McCARTHY, James E., 1st Lieut., Kenedy, Texas, 2d Division, Fort Sam Houston, Texas.
McELROY, Robert B., 1st Lieut., Rogers, Texas, 2d Division, Fort Sam Houston, Texas.
McGEHEE, Frank Owen, 1st Lieut., Houston, Texas, 2d Division, Fort Sam Houston, Texas.
McMILLAN, George S., 1st Lieut., Hurley, N. M., 45th Division, Camp Barkeley, Texas.
MONROE, Myrick L., 1st Lieut., Jasper, Texas, 36th Division, Camp Bowie, Texas.
NEWSOM, Robert L., 1st Lieut., Munday, Texas, 36th Division, Camp Bowie, Texas.
PARROTT, Robert U., 1st Lieut., Smithville, Texas, 36th Division, Camp Bowie, Texas.
PETERS, I. D., 1st Lieut., Houston, Texas, Camp Wallace, Texas.
PICKETT, Taylor Thomas, Captain, Garland, Texas, Camp Wallace, Texas.
PIERSON, Dwight Dillon, 1st Lieut., Buffalo, Okla., 156th Station Hospital, Camp Wolters, Texas.
ROTHE, C. N., 1st Lieut., San Antonio, Texas, 36th Division, Camp Bowie, Texas.
SCHULZE, Roscoe Gene A., 1st Lieut., Schulenburg, Texas, 52d Signal Battalion, Fort Sam Houston, Texas.
SHAPIRO, David E., 1st Lieut., Safford, Ariz., 82d Field Artillery, Fort Bliss, Texas.
SMITH, Howard Calvin, 1st Lieut., Colorado Springs, Colo., 36th Division, Camp Bowie, Texas.
STREET, Glenn Q., 1st Lieut., Halstead, Kan., Station Hospital, Fort Sam Houston, Texas.
WAGNER, Gerald W., 1st Lieut., Plainview, Texas, Station Hospital, Fort Bliss, Texas.

Orders Revoked

CARSON, John M., 1st Lieut., Shawnee, Okla.
CURRY, John Russell, 1st Lieut., Blackwell, Okla.
FOLLINGSTAD, Alvin H., Captain, Springer, N. M.
GUTHRIE, Aubrey E., 1st Lieut., Floydada, Texas.
HOLT, Russell, 1st Lieut., El Paso, Texas.
HYDER, Prentiss L., 1st Lieut., Corpus Christi, Texas.
PUIG, Valentine L., Jr., 1st Lieut., Laredo, Texas.
STEPHEN, James J., 1st Lieut., Goldthwaite, Texas.
TUCKER, Jesse Norris, 1st Lieut., Houston, Texas.
VAN SWERINGEN, Walter, Major, Amarillo, Texas.

NINTH CORPS AREA

The following additional medical reserve corps officers have been ordered to extended active duty by the Commanding General, Ninth Corps Area, which comprises the states of Washington, Montana, Oregon, Nevada, Utah, California and Idaho:

ANDERSON, Stanley B., 1st Lieut., Glendale, Calif., Moffett Field, Calif.
BABCOCK, Daniel W., 1st Lieut., Placerville, Calif., Camp Haan, Riverside, Calif.
BERNSTEIN, Henry C., 1st Lieut., San Francisco, March Field, Calif.
BLOUNT, Lester L., 1st Lieut., Spreckles, Calif., Camp Haan, Riverside, Calif.
BRASLOW, Lawrence, 1st Lieut., Los Angeles, March Field, Calif.
DAHLMAN, Rynol A., 1st Lieut., Los Angeles, Camp Roberts, Calif.
DOWNEY, Thomas P., 1st Lieut., San Diego, Calif., Camp Roberts, Calif.
GALANTE, Peter J., Captain, Chiloquin, Ore., Camp Callan, Torrey Pines, Calif.
GIERSON, Herman W., 1st Lieut., Los Angeles, March Field, Calif.
HELWIG, Carl M., Captain, Seattle, Fort Lewis, Wash.
LEAVITT, Arthur S., 1st Lieut., Los Angeles, Camp Callan, Torrey Pines, Calif.
LINDSAY, Charles V., Captain, Encinitas, Calif., Camp Roberts, Calif.
LOWENSTEIN, Bernard, Captain, Tacoma, Wash., March Field, Calif.
MARCHUS, Donald B., 1st Lieut., Redding, Calif., Fort Lewis, Wash.
MERILLAT, Herbert C., 1st Lieut., Sedro-Woolley, Wash., McChord Field, Wash.
POLLAK, John D., 1st Lieut., North Hollywood, Calif., Camp Callan, Torrey Pines, Calif.
REEDER, Thomas P., Jr., 1st Lieut., Newport Beach, Calif., Camp Callan, Torrey Pines, Calif.
SEILER, William E., 1st Lieut., San Diego, Calif., Camp Roberts, Calif.
SPIVEY, William L., 1st Lieut., Taft, Calif., Camp Callan, Torrey Pines, Calif.
TUFTS, Frank Elwood, 1st Lieut., Sacramento, Calif., McClellan Field, Calif.
WEINBERG, Sydney L., Captain, Hollywood, Calif., Camp Callan, Torrey Pines, Calif.

Orders Revoked

COTTRELL, George W., 1st Lieut., reported March 17 as assigned to Fort Lewis, Wash., such orders revoked.
MERRET, Russell J., 1st Lieut., reported February 25 assigned to 1st Medical Regiment, Fort Ord, Calif., relieved from active duty.

ORDERED TO FOREIGN DUTY

BAERS, Harry, 1st Lieut., from Fort Benning, Ga., to Hawaiian Department.
CRANSTON, Clyde J., Captain, from Fort Hayes, Ohio, to Hawaiian Department, sailing from New York April 1.
FOSTER, George B., Jr., Colonel, from Hawaiian Department to San Francisco Port of Embarkation, Fort Mason.
HEFLEBOWER, Roy C., Colonel, from Hawaiian Department to San Francisco Port of Embarkation.
LOCHEN, Everette L., Captain, from Chanute Field, Ill., to Hawaiian Department.
MATTHIS, Austin W., Captain, from Fort Douglas, Utah, to Hawaiian Department.
NOELL, Livingston P., Jr., 1st Lieut., from Kelly Field, Texas, to Hawaiian Department.
RICH, John W., Major, from Hawaiian Department to Tilton General Hospital, Fort Dix, N. J.
SKOW, George D., 1st Lieut., from Patterson Field, Ohio, to Philippine Department.
TOUPKIN, Jerome H., 1st Lieut., from Fort Benjamin Harrison, Ind., to Hawaiian Department, sailing from New York April 1.
WHITE, Raymond L., 1st Lieut., from Santa Maria, Calif., to Hawaiian Department.

THE 134TH MEDICAL REGIMENT AT FORT BRAGG

The 134th Medical Regiment from the New York National Guard with units at Albany, Corning, Ticonderoga and Syracuse is now on extended active duty at Fort Bragg, North Carolina. Following are the rank and home addresses of the medical officers on duty with this medical regiment:

DAVIS, Ralph H., Major, Penn Yan.
DUNGAN, Clarence E., 1st Lieut., Auburn.
EPSTEIN, William M., 1st Lieut., Newark, N. J.
FITZGERALD, Thomas G., 1st Lieut., Albany.
HEBEL, Herbert D., 1st Lieut., Auburn.
HOOD, Robert I., Captain, Corning.
JOHNSON, Paul C., 1st Lieut., Penn Yan.
KELLEHER, Vincent R., 1st Lieut., Fort Edward.
KIELY, James A., 1st Lieut., Binghamton.
McKEON, John G., 1st Lieut., Albany.
MIERAS, Marion D., 1st Lieut., Elmira.
MOORE, Francis W., Colonel and Commanding Officer, Brooklyn.
MURPHY, James M., 1st Lieut., Willard.
O'BRIEN, Richard A., Major, Corning.
ROONEY, James F., Lieut. Col., Albany.
SARGENT, Carlton W., 1st Lieut., Dundee.
STANSBURY, Frederick C., 1st Lieut., Syracuse.
TAMASI, Joseph J., 1st Lieut., Garden City.

SELECTIVE SERVICE EXAMINATIONS IN NEW JERSEY

Through the cooperation of the Second Corps Area of the Army and the New Jersey State Tuberculosis Committee, every man inducted into the military service through the selective service system received a roentgen examination of the chest at a cost of 75 cents per man, the cost being paid by the government, it was reported at a meeting of the committee on medical preparedness of the Medical Society of New Jersey with chairmen of county committees and representatives of local and induction boards in Trenton in February. Up to December 31 among 16,412 registrants examined local boards found 139 cases of tuberculosis, 70 of which were previously unknown, it was reported. The induction boards examined 12,016 selectees from November 23 to February 28 and rejected 80 for tuberculosis. A statement of the number of selectees rejected for all causes from November 25 through January 31 showed that 976 out of a total of 6,283 registrants examined were rejected for medical and 46 for nonmedical causes. According to this report, the general rate of rejections by induction boards up to January 31 was 16.2 per cent, and the rate was reduced during the month of February to 10 per cent, it was said.

INDUCTION BOARD REJECTIONS IN CONNECTICUT

Figures recently released by the Connecticut Selective Service Headquarters show that of the 4,832 men examined by local boards and sent to the army induction board in Hartford as fit for military service 393, or slightly more than 8 per cent, have been rejected for physical defects and 59 have been found not acceptable for other reasons.

The greatest cause of rejection is dental conditions, which have caused 79 men to be turned down. Faulty eyesight has been found in 51, substandard abdominal conditions, including hernia, in 47, ruptured ear drums in 40, while 35 early cases of tuberculosis have been found by the roentgen examination that is being given to all candidates in Connecticut. Among the other causes for rejection have been venereal disease 35, heart diseases 32, below standard weight, height and chest measurement 22, nervous and mental disorders 18, defects of hands and feet 10, diseases of mouth and nose 5, spine 5, metabolic diseases and diseases of the blood 5.

Conviction of a felony accounted for 44 of the 59 rejections for causes other than physical defects, and 7 men were unable to understand simple English.

Thus Connecticut is rapidly approaching a record low in the number of draftees rejected by the Army induction board. As more experience is obtained in the operation of the draft the physicians on the local boards and the induction board, all of whom have been furnished by the Connecticut State Medical Society, are getting closer together in their results.

NAVAL MOBILE HOSPITALS

A five hundred bed mobile general hospital will be transported to Pearl Harbor, Hawaii, to supply hospital facilities for the naval forces pending construction of a permanent naval hospital there. Congress has just appropriated $300,000 for the mobile hospital, and Comdr. John H. Chambers, M. C., U. S. Navy, has been assigned to the unit to supervise its organization. Commander Chambers has been executive officer of the Navy's first mobile base hospital stationed at Guantanamo Bay, Cuba; he with two other officers from that unit will go to the Navy Medical Supply Depot in Brooklyn to assemble the equipment for the mobile base hospital number 2, a job which it is expected will be completed by June 1. The first mobile hospital has functioned satisfactorily; it has fourteen medical officers on the staff, three pharmacists and one hundred and eighty-one enlisted hospital corpsmen and one hundred and fifteen enlisted men with nonhospital ratings.

COMPETITION FOR THE WELLCOME PRIZE

The Sir Henry Wellcome Medal and Prize, offered each year through the Association of Military Surgeons of the United States, will be awarded this year for the most useful paper on an original investigation into any phase of army or navy field service, the association announces. Appropriate subjects could relate to camp sanitation and expedients, food inspection, emergency care of wounded, evacuation, landing operations, health measures in occupied territory, control of communicable disease, or others of similar nature. Relative value to the services as a whole will be the determining factor. Competition is open to all medical officers of the government services and all members of the association. Each competitor must furnish five copies of his paper, which must not be signed with his true name but identified with a nom de plume or a distinctive device. Papers must be forwarded to the secretary of the Association of Military Surgeons of the United States, Army Medical Museum, Washington, D. C., so as to arrive not later than August 20.

MOTION PICTURES ON PERSONAL HYGIENE

Utilizing information furnished by the Surgeon General, two motion picture films on the general subject of personal hygiene have been produced in Hollywood by the Research Council of the Academy of Motion Picture Arts and Sciences. These pictures, which have been accepted by the War Department, will be shown to officers and enlisted men with a view to promoting the health of the army. Among other things, the film will show the proper care of the teeth, hands, scalp and other parts of the body and methods of guarding against infection when exposed to contagious diseases.

BRITISH RELIEF NEEDS FUNDS

The Medical and Dental Committee of the East Bay, British War Relief Association of Northern California, announces that the recent purchase and dispatch to England of a portable demountable x-ray and fluoroscopic unit with motor generator has exhausted all its funds. Any one wishing to donate funds to the association should make checks payable to the British War Relief Association, Medical Committee, and mail to George U. Wood, secretary, 434 Thirtieth Street, Oakland, Calif.

MEDICAL LABORATORY IN PUERTO RICO

It is expected that the new medical laboratory which will operate in conjunction with the San Juan base hospital in Puerto Rico will be in operation in July. Lieut. Col. Virgil H. Barnard, M. C., U. S. Army, has been named commanding officer of the laboratory, which will serve the Puerto Rico Department, using a staff about equal to the staff of a corps area laboratory. The laboratory will be located near the School of Tropical Medicine of Columbia University at the outskirts of the city of San Juan.

ARMY MONTHLY MEETING

At the December meeting at the Army Medical Center of the Medical Department Officers residing in Washington and vicinity Brigadier General Frederick F. Russell, U. S. Army, retired, and now professor of preventive medicine and epidemiology at the Harvard University Medical School, was the speaker. General Russell formerly was for many years a teacher in the Army Medical School and a pioneer in the development of the antityphoid vaccine which has been in use in the army.

VACANCIES IN THE MEDICAL CORPS RESERVE

There are about seven thousand vacancies in the Medical Corps Reserve and more than eight hundred in the Medical Administrative Corps Reserve, according to the *Army and Navy Journal*, March 1. Only the Ninth Corps Area has attained full peacetime Medical Reserve Corps strength.

ORGANIZATION SECTION

AMERICAN MEDICAL ASSOCIATION ON TRIAL

THE TRIAL OF THE CASE OF THE UNITED STATES OF AMERICA
VS.
THE AMERICAN MEDICAL ASSOCIATION, A CORPORATION, THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA, A CORPORATION, THE HARRIS COUNTY MEDICAL SOCIETY, AN ASSOCIATION, THE WASHINGTON ACADEMY OF SURGEONS, AN ASSOCIATION, ARTHUR CARLISLE CHRISTIE, COURSEN BAXTER CONKLIN, JAMES BAYARD GREGG CUSTIS, WILLIAM DICK CUTTER, MORRIS FISHBEIN, THOMAS ALLEN GROOVER (DECEASED), ROBERT ARTHUR HOOE, ROSCO GENUNG LELAND, THOMAS ERNEST MATTINGLY, LEON ALPHONSE MARTEL, FRANCIS XAVIER MCGOVERN, THOMAS EDWIN NEILL, EDWARD HIRAM REEDE, WILLIAM MERCER SPRIGG, WILLIAM JOSEPH STANTON, JOHN OGLE WARFIELD JR., OLIN WEST, PRENTISS WILLSON, WILLIAM CREIGHTON WOODWARD, WALLACE MASON YATER, JOSEPH ROGERS YOUNG.

(Continued from page 1576)

MARCH 18—MORNING

TESTIMONY OF DR. RICHARD H. PRICE

DIRECT EXAMINATION

By Mr. Leahy:

Richard H. Price said he is a practicing physician at present on active duty in the Naval Reserve at Norfolk, Va. His preliminary education was in the Auburn, N. Y., high school; Geneseo, N. Y., normal school, where he received the medical student qualifying certificate from the University of the State of New York. He was graduated at the College of Physicians and Surgeons in Boston but had most of his medical education at the University of Buffalo. He had graduate work at Buffalo and postgraduate work at the University of Chicago and the University of Pennsylvania, and ten years of hospital work. Besides the internships, it was mostly general medicine, internal medicine, neurology and psychiatry. Most of them were government hospitals in the United States Public Health Service and the Veterans Bureau—what is now the Veterans Administration.

Q.—Over what period of time were you employed by the Veterans Administration? *A.*—From the organization of the Veterans Bureau—I think it was about 1923—until 1927. Before that I had been with the Public Health Service.

Q.—In what cities or parts of the country have you worked? *A.*—At Pittsburgh, Philadelphia, East Norfolk, Mass., Perryville, Md., and Augusta, Ga.

Q.—When did you first join the staff of G. H. A.? *A.*—I did some work without pay for them in December 1937, but I went on their salary roll in January 1938.

Q.—What was the type of work you first did without pay, that you mentioned? *A.*—X-ray work.

Q.—What experience had you had in x-ray work? *A.*—I had had ten years' experience in x-ray work.

Q.—When you went on the staff in what capacity did you go on the staff? *A.*—First, in charge of general medicine.

Q.—How long were you with the G. H. A.? *A.*—I was with them more than a year.

Q.—Were you steadily employed, then, during the year 1938? *A.*—That is right.

Q.—How much of your time did you spend at G. H. A.? *A.*—Full time.

Q.—And full time was how much of the day or night? *A.*—From 9 in the morning until 6 at the G. H. A., and then the rest of the twenty-four hours making home calls in Virginia, Maryland and the District of Columbia.

Q.—Do you recall how many were on the staff while you were there? *A.*—I believe at first there were five, and then later possibly seven or eight all together.

Q.—What was the general character and type of work which you did in G. H. A.? *A.*—The general type of work was to make examinations, physical examinations, and to prescribe treatment. I did not do any major surgical work or any obstetrical work or pediatric work. General medicine was to the exclusion of those.

Q.—Did you ever make any application to a hospital for hospital privileges? *A.*—While I was with G. H. A.?

Q.—Yes. *A.*—I applied to two of the local hospitals.

Q.—When did you make the applications? *A.*—I made one in the spring of 1938 and one in the fall of 1938, if I remember correctly.

Q.—How did you apply? I do not mean, now, formally, but did you apply personally or did you have someone apply for you? *A.*—I applied by letter.

Q.—To what hospital did you apply in the spring? *A.*—To the Homeopathic Hospital. I think it is called the National Homeopathic Hospital.

Q.—To what hospital did you apply later? *A.*—In the early fall, to the Garfield Memorial Hospital.

Q.—What was the result from the Garfield Hospital? *A.*—I was given courtesy privileges at Garfield Hospital.

Q.—Do you recall the character or type of privileges which you applied for? *A.*—I believe I applied for that very thing—courtesy privileges for medical cases, not for surgical or obstetric or pediatric cases, but for medical cases.

Q.—Did you also acquire privileges at Homeopathic Hospital? *A.*—No, sir; I did not.

Q.—By the way, were you a member of the District Medical Society when you applied? *A.*—No. I have never been a member of the District Medical Society.

Q.—Have you ever been a member of the American Medical Association? *A.*—Yes, sir.

Q.—Are you still? *A.*—No, sir.

Q.—When was it you ceased being a member? *A.*—I ceased in January of this year.

Q.—What was the result at Homeopathic Hospital? I believe you said you applied there also. *A.*—I applied, but I did not receive privileges. I do not remember whether they wrote me a letter and said I did not have them or whether they did not answer. But I know I never obtained privileges. In fact, I have never been in that hospital. I do not even know where it is.

Q.—Following your privileges at Garfield, what was Garfield's attitude toward patients?

Mr. Lewin:—Objected to unless he fixes the time when the privileges were granted. It is our information he got them two days before this indictment was returned.

Mr. Leahy:—If you want to testify, take the stand and I will cross-examine you.

Mr. Lewin:—I do not think the question is relevant.

THE COURT:—I think that counsel should not make statements of fact.

Mr. Lewin:—I beg your Honor's pardon, but I thought I had to make it as a basis for my objection.

THE COURT:—No. The basis of your objection would be that the testimony is not relevant unless it is shown that it was before the time of the indictment.

Mr. Lewin:—I am sorry. I wish I had put it that way.

By Mr. Leahy:

Q.—Could you give us, according to your best recollection, Doctor, when it was that you obtained privileges at Garfield? *A.*—I could not fix the date; no, sir. But it was not very long after I made application. I think it was within a month, or

something like that, after I made application. I don't remember the date, but I am quite sure it was in the fall of 1938.

(Here there was much discussion about the time of the incidents concerned.)

. . . . . .

By Mr. Leahy:

Q.—Did you have any patients at all in any of the hospitals in Washington prior to Dec. 20, 1938? *A.*—I am not certain about that.

Q.—You got your privileges on Dec. 19, 1938. How long before that time did you make application for the privileges? *A.*—I believe it was about a month before.

Q.—What difficulty did you have in obtaining privileges from Garfield Hospital, Doctor? *A.*—I did not have any difficulty in obtaining privileges.

Q.—After you wrote the letter, and following a period of approximately a month, then what occurred? *A.*—I received the privileges asked for.

Q.—While you were at G. H. A. in general medicine what was your experience with reference to the quality of care which you were able to give your patients?

Mr. Lewin:—Objected to.

THE COURT:—I do not think that is material.

Mr. Leahy:—Your Honor, may we approach the bench on that?

THE COURT:—Certainly.

(Counsel for the respective parties approached the bench and conferred with the Court in a low tone of voice.)

(The discussion concerned the right of the witness to testify as to the quality of service rendered by G. H. A. The witness was temporarily withdrawn to give the Court opportunity to consider previous evidence by Dr. Cabot on this point.)

TESTIMONY OF DR. ROSCO GENUNG LELAND

DIRECT EXAMINATION

Dr. Leland said he has been director of the Bureau of Medical Economics for ten years. He graduated from the Mendon, Mich., high school and from the University of Michigan, department of Literature, Science and the Arts with the degree of Bachelor of Arts in 1907. He received the degree of doctor of Medicine from the Michigan University in 1909. He had an assistantship in the University of Michigan, 1909 to 1910, then did private practice of medicine for nine years in southwestern Michigan. In the meantime he was in the service of the army of the United States for twenty-six months in the United States, France and England, returning in May 1919. Then he became one of the staff of the Ohio State Department of Health for about six years. Here he was administrative head of a division of health which had in it the bureaus of tuberculosis, hospitals, public health nursing, venereal diseases, social protective measures, and care of ophthalmia or prevention of ophthalmia in the newborn. Then he went to Toledo, Ohio, to take charge, as executive secretary, of the Toledo Public Health Association, an organization of some twenty-six private organizations, and was there about fifteen months, from 1926 until March 1927. Next he became assistant in the Bureau of Health and Public Instruction of the American Medical Association for four years.

Q.—Just generally, and without going into too much detail, what are the functions of that bureau in the American Medical Association? *A.*—That bureau undertakes to provide information on health matters and the preservation of health and the prevention of disease for the public.

Q.—And in what way, if any, does it distribute the knowledge which it acquires? *A.*—It contributes largely through the health magazine published by the American Medical Association, known as *Hygeia*. It publishes a large number of separate publications on health subjects, and it has in charge a radio program.

Q.—What is the function of the radio program? *A.*—The radio program has been devised to carry information concerning the medical profession and health to the public, and particularly to children who are in grade and high school.

Q.—What subjects are broadcast for the public benefit? *A.*—The topic of the broadcast at the present time is a series of radio programs on the subject of "Doctors at Work," giving to the public in simple terms, dramatized, a word picture of the things that doctors do from day to day.

Q.—How many of these pamphlets are published by that particular bureau of the American Medical Association? *A.*—I have no accurate recollection of the number, but I presume it would be at least fifty or seventy-five; and in addition to the radio program items there would be several hundred.

Q.—How are they distributed—free, or for a charge? *A.*—Free.

Q.—What is the method of distribution? Is it on call or on subscription or what? *A.*—On request.

Q.—What work did you then take over? *A.*—I was made Director of the Bureau of Medical Economics.

Q.—How long has that bureau been in existence? *A.*—It was authorized by the House of Delegates of the American Medical Association at its meeting in Detroit in 1930, and the bureau itself was organized in March of 1931. At that time I was made the director.

Q.—How large a bureau is that, Doctor? *A.*—I have three associates and twenty-five clerks.

Q.—Generally, what are the functions of the Bureau of Medical Economics? *A.*—The Bureau of Medical Economics undertakes to discover and collect information concerning the amount of sickness and the way in which people get their medical and hospital care, the way in which they meet their bills. It also collects and keeps for reference a large amount of information known as Vital Statistics, statistics pertaining to births and deaths and the types and amount of disease.

Q.—How is most of that information collected by the bureau? *A.*—A great deal of it is collected from official organizations, such as the Census Bureau here in Washington, the International Labor Organization in Geneva, Switzerland, with offices here, and from a large number of organizations that are engaged in the collection of information pertaining to vital statistics, statistics on population and statistics of various other types of studies, and also from medical organizations that have conducted studies in various parts of the country. State medical societies have conducted a large number of separate studies.

THE COURT:—Mr. Leahy, I think a reasonable amount of background is all right, but if you kept the witness from elaborating too much I think it would be better.

Mr. Leahy:—Very well.

By Mr. Leahy:

Q.—Doctor, are there any articles published by the bureau which appear in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION? *A.*—From time to time articles are published in THE JOURNAL, but there are other articles and reports that are too lengthy to publish in THE JOURNAL, and they are published as separate publications.

Q.—Doctor, you have sat here in the court room, have you not? *A.*—Yes, sir.

Q.—You heard the testimony, did you, of Dr. Cabot with reference to articles published by the Bureau of Medical Economics? *A.*—I did.

Q.—In publishing articles under the supervision of your bureau, what is the practice with reference to the manner of their presentation? Are both sides presented, only one side; are they argumentative, factual or what? *A.*—We try to do both. On some subjects there are perhaps definitely two sides. We endeavor to present both sides. On other subjects there is probably only one side and we endeavor to present to the public or to the medical profession both sides of a question.

Q.—On any questions on which articles have been published in THE JOURNAL, Doctor, what have you to say with reference to the scientific study placed in the articles? *A.*—We endeavor to bring to the examination of the subject under consideration the very highest degree of scientific treatment in order to arrive at the most sound judgment.

Q.—Now, Doctor, coming down more specifically, do you recall when you first heard of G. H. A.? *A.*—I believe it was at the time of the American Medical Association meeting in Atlantic City in June 1937.

Q.—Do you recall now whether a copy of a letter from—I think it is Major General Ireland—was received by your bureau in the American Medical Association in Chicago? *A.*—I have seen, since I have been here, a copy that was said to have been sent to my bureau. I do not recall seeing it at the time it was said to have been sent there.

Q.—Through what meeting or in what manner did you hear of G. H. A. at that convention? *A.*—As I recall it, it was a brief report or statement made by Dr. Woodward to the House of Delegates.

Q.—Do you recall whether any action was taken on the report at the time? *A.*—I do not recall any action.

Q.—When next did you hear of G. H. A.? *A.*—I was asked to accompany Dr. Woodward to Washington to confer with members of the Medical Society of the District of Columbia in July of 1937.

Q.—Do you recall what instructions, if any, you had at the time you came here to Washington in July of 1937? *A.*—The only instruction I had was to secure as much information as possible about the nature and operation of G. H. A.

Q.—What information had you before that time? *A.*—Only that given by Dr. Woodward at the meeting.

Q.—Personally what effort had you made prior to that time to find out anything about G. H. A.? *A.*—I had made no effort. I knew nothing about the existence of such an organization.

Q.—Did you come to Washington in July 1937? *A.*—I did.

Q.—Whom did you meet when you got here, in the District Medical Society, if any one? *A.*—I doubt that I can recall all of those of the District physicians who were at that meeting, but I believe I saw Dr. Conklin, Dr. Macatee, Dr. Hooe and Dr. McGovern; but I think there were more than that.

Q.—Did you know Dr. McGovern before that time? *A.*—I believe I had met him, but I cannot recall when or where.

Q.—Do you remember whether you had met Dr. Hooe before that time or not? *A.*—No; I believe not.

Q.—Had you ever met Dr. Macatee before that time? *A.*—Yes. I think Dr. Macatee had been in the House of Delegates for some time and I had known him there.

Q.—How many of these defendants who have been in the court room with you here since this trial started had you known, other than in the American Medical Association, before you came here? *A.*—I don't know that I can name them offhand. I knew Dr. McGovern.

THE COURT:—Suppose you call the names.

By Mr. Leahy:

Q.—I will call the names, Doctor, and see if you can tell us, as you hear the names read, when you first met them, omitting the ones you have told us about having met for the first time. (In response to the call the witness testified he had met Dr. Christie in connection with some work pertaining to the Committee on the Costs of Medical Care. He had not met Drs. Custis or Martel. He had not met Drs. Neill, Reede, Sprigg, Stanton, Warfield, Willson, or Young. He thought he had met Dr. Yater probably sometime in 1935 in connection with the organization of a plan of the District Medical Society that was organized about that time.)

Q.—Now, going back to this meeting in July of 1937, did Dr. Woodward come here to Washington with you? *A.*—Yes, sir.

Q.—Do you recall now what information you obtained, if any, upon that occasion, about G. H. A.? *A.*—No information in addition to that which we already had had.

Q.—Do you recall now about what information you had when you came to Washington, about G. H. A.? *A.*—We had information concerning the articles of incorporation, as I recall it, and some information about the methods of financing; but beyond that I cannot recall any other definite information.

Q.—What other thing was discussed at this meeting of July 1937 between you all, other than matters of trying to get information? *A.*—As I recall it, Dr. Woodward suggested that the District Medical Society ought to have counsel, and I made a suggestion for the District Medical Society itself pertaining to a method by which prepayment medical care could be organized.

Q.—Do you recall now personally ever having come to Washington again with respect to G. H. A.? *A.*—I do not.

Q.—Do you recall now whether you ever attended any meeting of the District Medical Society? *A.*—I have attended meetings of the District Medical Society on several occasions, but not in the interest or for the purpose of finding out about or discussing G. H. A.

Q.—When you returned to Chicago what was done by you in Chicago with reference to G. H. A., if anything? *A.*—I made a verbal report of the visit to Washington to Dr. West.

Q.—From the time that you returned to Chicago and made the verbal report to Dr. West of the meeting here in July of 1937, what else have you ever done with reference to G. H. A. in any way, shape, or form? *A.*—Nothing.

Q.—Have you ever come to the District Medical Society with reference to any plan which you had in mind? *A.*—Yes, sir.

Q.—Do you recall when that was? *A.*—One of those meetings was in December of 1938, as I recall it, and there were several others, but I cannot recall the exact dates.

Q.—In what capacity did you come when you came in November of 1938, or on any of the other occasions which you just mentioned? *A.*—As Director of the Bureau of Medical Economics.

Q.—For what purpose? *A.*—To discuss with the Committee of the District Medical Society methods that could be used in the development of a plan to provide people of low incomes with medical services on a prepayment basis.

Q.—Do you recall whether you had any plan of your own, now? *A.*—I had no plan of my own. I had frequently said that it was not possible to develop a master plan; but I did have ideas about certain principles that ought to be incorporated.

Q.—Do you recall whether at or about that time the Society was formulating a plan? *A.*—The Society was formulating a plan which I believe was an outgrowth of a plan I mentioned a moment ago, which was developed in 1935.

Q.—At any time, Doctor, while you were in the District of Columbia with any of the officers or members of the District of Columbia Medical Society, did you ever discuss the matters or ways or means of any one hindering or restraining Group Health Association? *A.*—No, never.

Q.—Was there ever any correspondence between you and any member of the District Medical Society with reference to the same subject matter about which I have inquired? *A.*—No, sir.

Q.—What attention, if any, Doctor, did you pay to G. H. A. after the meeting of July 1937? *A.*—I paid no particular attention to it. I think occasionally, the times of which I do not recall, I may have asked Dr. Woodward a question or two, but beyond that I did nothing.

Q.—Do you recall a meeting in Chicago on the 6th day of November 1937? *A.*—Yes.

Q.—Were you present at that meeting? *A.*—Yes.

Q.—Who else was there? *A.*—Dr. McGovern, Dr. Hooe, Dr. West, and Dr. Woodward.

Q.—What part did you take in that meeting? *A.*—None.

Q.—Did you say a word? *A.*—Not a word.

Q.—Following that meeting, did you meet Dr. Hooe or Dr. McGovern again in any way? *A.*—Well, I may have met them some time but I cannot recall any particular instance at present.

Q.—Now, you said that in your bureau that you had some assistants: did you say three? *A.*—Three.

Q.—During the years 1937 and 1938 how many assistants were in your bureau? *A.*—I had two at that time.

Q.—And what were the duties or functions of those assistants? *A.*—They were charged with the duties of taking over some of the work of the Bureau of Medical Economics. They were trained or given the duties of taking care of certain studies and because they had developed a familiarity with certain subjects they were also given certain correspondence to take care of.

Q.—How heavy, or otherwise, is the correspondence of the bureau? *A.*—It varies somewhat from three thousand to seven or eight thousand letters a year.

Q.—And of what type or character is the correspondence in your bureau? *A.*—A great many of the letters are inquiries coming to the Bureau of Medical Economics and require a considerable amount of research in order to send back an intelligent and satisfactory reply to the inquiry.

Q.—Now, Doctor, has there ever been fixed by your bureau any policy with reference to group prepayment plans of medicine? *A.*—Only those policies established by the House of Delegates.

Q.—What jurisdiction has your own bureau for fixing any policy for said things? *A.*—None whatever.

Q.—Has the House of Delegates, to your knowledge, ever fixed a policy under which your bureau operates with reference to this group prepayment plan of practice? *A.*—In 1934 the House of Delegates adopted what are known as the ten principles, which are intended to assist state and county medical societies that felt a desire to organize some plan of prepayment care. Later on, the House of Delegates also adopted ten principles which applied to the organization and administration of group hospitals. Those are the two main policies.

Q.—What policy of opposition or otherwise has your bureau operated under since 1934 to group prepayment plan? *A.*—The only opposition that the bureau has had has been to follow that which was established by the House of Delegates in opposition to compulsory sickness insurance.

Q.—No other policy whatsoever has characterized your work in the Bureau? *A.*—No.

Q.—Now, some correspondence—I won't go over it all with you—some correspondence was introduced in evidence here with a Mr. Laux: do you recall that? *A.*—Yes, sir.

Q.—Was he a member of the staff of your bureau? *A.*—Yes.

Q.—And there is also some correspondence here with a Mr. Simons: do you recall that? *A.*—Yes.

Q.—Was he also a member of the staff of your bureau? *A.*—He was.

Q.—Now, with respect to the correspondence conducted by either Mr. Laux or Mr. Simons, what knowledge if any, had you of the correspondence written by either or both of these gentlemen at the time? *A.*—They carried on a considerable correspondence that I never saw. I had confidence in those two associates to carry on a certain type of correspondence without my paying very much attention to it.

Q.—As you heard the correspondence which was dictated by Mr. Laux and Mr. Simons, what knowledge, if any, did you have of the correspondence, and its contents, before you heard it here in the court room? *A.*—None.

. . . . . .

Q.—What is your practice as to reading all the correspondence which comes to the bureau? *A.*—I read only those bits of correspondence which I feel I should answer myself. I sometimes read also correspondence which I pass on to associates to handle because it is necessary to arrive at some decision as to whether I should myself do it or pass it on to them.

Q.—I now show you Exhibit 264 for the Government, which is a carbon copy of a letter dated March 23, 1934. Will you look that over and see if you can recall that as a carbon copy of an original, which original you dictated? *A.*—I wrote the original of this.

Q.—Can you now tell us whether it was an original answer to an earlier letter which I just brought to your attention? *A.*—I believe it is.

Q.—The letter which has been identified as Exhibit 265 is on the letterhead of the Providence Mutual Life Insurance Company of Philadelphia. It is dated March 16, 1934. It is written to Arthur J. Cramp, M.D., Director of Bureau of Investigation, American Medical Association, Chicago:

"Dear Dr. Cramp:"

Who is he? *A.*—He was Director of the Bureau of Investigation, American Medical Association.

Q.—Is that bureau still in existence? *A.*—Yes.

Q.—Under the jurisdiction of what office or bureau or department; or is it an independent bureau? *A.*—None; it is an independent bureau.

Q.—What does the Bureau of Investigation do? *A.*—It collects information concerning the operations of quacks, charlatans and pertaining to some "patent medicine" and a lot of curious devices for the treatment of people.

Q.—And having collected that information what does it do with it? *A.*—It publishes the facts about many of those individuals.

Q.—In what magazine? *A.*—In THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

Mr. Leahy:—The letter reads:

"I am enclosing a copy of a circular which we have just received through our Los Angeles representative. This is designed to interest our Los Angeles agencies as a group to avail themselves of whatever service this medical clinic has to offer at the fee schedule, as I understand, which is quoted herein.

"Before instructing our general agent in Los Angeles as to what they shall do relative to this matter, I should like your opinion concerning the ethics of this group, and whether the principle on which such a medical group is operated is consistent with the highest medical ethics.

"Doubtless, there is available to you full information concerning the staff of physicians who make up this particular medical group. In so far as you know, are they all men of ability and integrity?

"I should greatly appreciate your opinion concerning this matter and any recommendation which you may have regarding this type of medical practice.

"Very truly yours,
"Ernest J. Dewees,
"Assistant Medical Director,
"Providence Mutual Life Insurance Company."

Q.—Doctor, what do you do toward volunteering information with reference to any particular group, or devices, or quacks, or what not? *A.*—To whom? The inquirer?

Q.—Do you do so only on inquiry, or do you volunteer information? *A.*—Usually the information is given out chiefly on inquiry by someone who writes to us, although in some instances the subject may be presented through the columns of THE JOURNAL.

Q.—I notice it says in that letter:

"Doubtless, there is available to you full information concerning the staff of physicians who make up this particular medical group"; as to the ability and integrity of these men.

Do you know what he refers to in that statement? *A.*—I would assume he referred to the American Medical Directory or perhaps to the files of the American Medical Association.

Mr. Leahy:—In Exhibit 264, which is the number this carbon copy has received, on March 23, 1934 Dr. Leland wrote to Dr. Ernest J. Dewees, Assistant Medical Director, Providence Mutual Life Insurance Company, Philadelphia, Pennsylvania:

"Dear Dr. Dewees:

"The Los Angeles Medical Association, I believe, will be glad to give you a more recent report on the personnel and activities of the Ross-Loos medical group than can be given from this bureau.

"I am personally of the opinion that the methods used by many of the organizations similar to this one do not contribute to the best interests of either the public or medical profession.

"The Secretary of the Los Angeles Medical Association is Dr. Harry H. Wilson, whose office is at 1925 Wilshire Boulevard, Los Angeles, California.

"It may be of some interest to you to note a newspaper report under date of March 6, 1934, states that Dr. H. C. Loos and Donald Ross 'were banished from the Los Angeles County Medical Association Monday night for engaging in a plan of health insurance.'

"For that and other reasons, I believe it might be more satisfactory for you to secure the information you desire from the Los Angeles Medical Association.

"Sincerely yours,
"R. G. Leland."

By Mr. Leahy:

Q.—Do you recall, now, at the time you wrote this letter to Dr. Dewees, what information you had other than the newspaper report with reference to the activities of the Los Angeles Medical Association and the Ross-Loos Clinic? *A.*—We had information concerning the organization and operation of the Ross-Loos medical group, but this information concerning the newspaper item was entirely new. We had nothing on which to verify that statement; therefore, it seemed to me that checking with the local people was the wise procedure.

Q.—Had the American Medical Association ever taken any action against the Ross-Loos Clinic? *A.*—No, sir.

Q.—What jurisdiction had the American Medical Association over the activities of the Los Angeles Medical Association, if that be the name of it? *A.*—None.

Q.—Do you recall whether the question of the Ross-Loos Clinic ever came before the American Medical Association in any form? *A.*—It did.

Q.—Do you recall when? *A.*—I believe it was some time late in 1935, perhaps in 1936, it came to the judicial council of the American Medical Association as an appeal from an action of the California Medical Association.

Q.—Appeal by whom? *A.*—Appeal by Drs. Ross and Loos from the action of the Los Angeles Medical Society and the California Medical Association.

Q.—And what did the American Medical Association do on the appeal? *A.*—As I recall it, the judicial council of the American Medical Association reversed the action of the California Medical Association.

Q.—Are Drs. Ross and Loos members of the American Medical Association at this time? *A.*—I believe so.

Q.—You stated in the second paragraph of this letter:

"I am personally of the opinion that the methods used by many of the organizations similar to this one do not contribute to the best interests of either the public or medical profession."

To what did you refer when you wrote that to Dr. Dewees? *A.*—I referred to information that had come to the Bureau of Medical Economics concerning a considerable number of organizations that had become legally involved in California; I believe there were some one hundred and forty-three of such organizations in California, and many of them had become organized in late 1933, early 1934—a few some years before that—and about 1933 some of those organizers had been indicted and sent to prison.

Q.—How many of those organizations, as you recall, in California, had come under the investigation of the State of California? *A.*—There was a list of one hundred and forty-three of them that were being investigated and, as I recall it, at least six or seven individuals were finally indicted and sentenced.

Q.—Doctor, could you just briefly—do not go into details about it—but just substantially tell us about some schemes for giving medical attention and service in the United States that your bureau has investigated. *A.*—There are some two thousand or more industrial medical care plans. We haven't investigated those carefully but we know there are that many and we know the type and, in general, the way in which they operate. There are about three hundred student health services in the colleges and universities; about three hundred—may I look at some notes—there are about three hundred of the type of organizations known as mutual health and hospital associations. Those organizations are, I presume, what one might call "consumer" groups.

Q.—How many of those do you say are operating? *A.*—About five hundred, and those contain the one hundred and forty-three to which I have just referred, in California. There are about nineteen flat rate plans, which are used by hospitals to give care to people on a flat rate basis, including everything that is needed. About fifty-four hospital insurance companies; seventy-eight group hospital plans operating and about sixty or

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more that are proposed, and about three hundred and fifty group medical plans; at least twenty-four union sick benefit plans and probably three hundred and fifty rural medical plans which are being sponsored by the Farm Security Administration.

Q.—Now, with reference to these groups which you have just mentioned, what action has the American Medical Association taken or advocated against them? *A.*—They have taken no action except to secure the information about them and, in some instances, publish the facts concerning them.

Q.—But there are that many plans which you just mentioned now in operation? *A.*—There may be more.

Q.—And as director of your own bureau what action have you taken against any one? *A.*—None.

Q.—To return, however, to the paragraph in your letter to Dr. Dewees:

"I am personally of the opinion that the methods used by many of the organizations similar to this one do not contribute to the best interests of either the public or medical profession,"

to what are you referring when you say:

"the methods used by many of the organizations"?

A.—The methods I think I had in mind were those used by these organizations in California which had taken money away from people and had not been in existence and in operation to give service when the people needed the service.

Q.—What information, Doctor, had you at the time about the Ross-Loos Clinic; your own personal information? *A.*—I had visited the Ross-Loos group some time in 1932.

Mr. Leahy:—This is from the Belmont High School, 1575 West 2d Street, Los Angeles, to the A. M. A., Chicago:

"Gentlemen:

"We have out here in Los Angeles a medical group called the Ross-Loos medical group. Could you advise me if this organization meets with the unqualified endorsement of the A. M. A.? I have been of the opinion that it was not exactly ethical and for that reason didn't care to endorse it.

"Thanking you for this information,

"Yours truly,
"George Horton."

268, which has just been identified by Dr. Leland is his reply, dated May 31, to the inquiry:

"The Los Angeles Medical Association, I believe, will be able to give you a more recent report on the personnel and activities of the Ross-Loos medical group than can be given from this bureau.

"The Secretary of the Los Angeles Medical Association is Dr. Harry H. Wilson, whose address is 1925 Wilshire Boulevard, Los Angeles, California.

"I am personally of the opinion that the methods used by many of these organizations similar to this one do not contribute to the best interests of either the public or the medical profession.

"It may be of some interest to you to know that a newspaper report under date of March 6, 1934 states that Drs. H. C. Loos and Donald Ross 'were banished from the Los Angeles County Medical Association Monday night for engaging in a plan of health insurance.'

"For that and other reasons I believe it might be more satisfactory for you to secure the information you desire from the Los Angeles Medical Association."

By Mr. Leahy:

Q.—Now, you stated in the second paragraph of that letter approximately the same opinion as you gave in the earlier paragraph, about which you testified, that

"organizations similar to this one do not contribute to the best intrests of either the public or the medical profession."

To what did you refer when you said they do not contribute to the best interests of either the public or medical profession? *A.*—I referred, as I said, I had in mind in the first letter that some of these organizations had been taking money away from people without giving them service, and also had in mind that many of them used advertising and solicitation, which are often used by such organizations, and they are not considered ethical practices.

Q.—And why are they not considered as ethical, Doctor, these practices of advertising and soliciting? *A.*—There is an opportunity in advertising to make exaggerated and unwarranted claims for the benefits which are advertised.

Q.—And as to solicitation? *A.*—The same thing holds true on solicitation. There is always a certain amount of word of mouth advertising.

Mr. Leahy:—271 is a letter of inquiry from R. H. Ludden, M.D., physician and surgeon, Viroqua, Wis., directed to the American Medical Association, attention of R. G. Leland:

"Gentlemen:

"Could you please send me information on the Ross-Loos medical group, Los Angeles, Calif.

"Yours very truly,
"R. H. Ludden, M.D."

270 is a carbon of a reply which Dr. Leland states he has written to 271. It is dated June 5, 1934, directed to Dr. Ludden.

"The Los Angeles Medical Association, I believe, will be able to give you a more recent report on the personnel and activities of the Ross-Loos medical group than can be given from this bureau."

Q.—Now, Doctor, have you seen the Ross-Loos Clinic since 1932, when you stated you visited it? *A.*—I have not.

"I am personally of the opinion that the methods used by many of the organizations similar to this one do not contribute to the best interests of either the public or medical profession."

Then he gives the name of the Secretary of the Los Angeles Medical Society; then the same paragraph as to the newspaper account of March 6, 1934, and concludes:

"For this and other reasons, I believe it might be more satisfactory for you to secure the information you desire from the Los Angeles Medical Association."

Q.—During the spring of 1934, when these three letters which you have just read and to which you replied were received by you, and the replies written by you, what information had you particularly of a recent date on the Ross-Loos Clinic, as of that date? *A.*—The only information I had, in addition to the operation of the clinic, was this newspaper account that apparently the Ross-Loos Medical Clinic or Dr. Ross and Dr. Loos had become somewhat involved with the Los Angeles Medical Association, but the exact nature of the difficulties were not known to me at that time.

Q.—Is that why you referred the inquirer back to the Los Angeles Medical Association? *A.*—Yes.

Q.—How did you happen to have the address of the Secretary of the Los Angeles Medical Association? *A.*—We maintain a directory of the names and addresses of all the secretaries of all the medical societies throughout the country.

Q.—By the way, may I ask this: Is it one of the functions of the American Medical Association, for the benefit of the Association and the profession and the public, to keep any record of all doctors in the United States, regardless of whether they are members of the A. M. A. or not? *A.*—The American Medical Association does that.

Q.—This is an inquiry from Drs. Rigby and Hargrave, of Shreveport, La.; it is 273, dated Jan. 22, 1935. It is addressed to the American Medical Association.

"Gentlemen:

"Due to the fact that I am chairman, of the Economics Committee, of the Shreveport Medical Society, I desire to get all the information that is obtainable on Medical Economics. We have, in this vicinity, some members of the medical fraternity, who do not belong to our local or state society and who engage in extensive advertising to further their practice of medicine. We have one, who claims to be a Fellow of Proctology, and there are others whom I could name operating in various branches of medicine. I also have in my possession, some information from the Ross-Loos Medical Group, Los Angeles, California. I would like to know if the Ross-Loos Medical Group of Los Angeles, are an ethical group of Doctors and if they belong to organized medicine.

"Any information you may be able to give me, will be appreciated."

To this Dr. Leland wrote the original of which 272 is a copy.

"The Los Angeles Medical Association, I believe, will be able to give you a more recent report on the personnel and activites of the Ross-Loos medical group than can be given from this bureau.

"The Secretary of the Los Angeles Medical Association is Dr. Harry H. Wilson,"

giving his address.

"I am personally of the opinion that the methods used by many of the organizations,"

and the same paragraph again.

"It may be of some interest,"

and the same paragraph.

"For this and other reasons, I believe it might be more satisfactory for you to secure the information you desire from the Los Angeles Medical Association.

"Under separate cover I am sending you a complete set of the publications of this bureau which I trust will be of interest and benefit to you."

Q.—Now, Doctor, have you any independent recollection of what constituted the set of publications which you sent to that doctor? *A.*—No, I do not have any recollection. The number and nature of the publications of the bureau have changed from time to time, adding each year several new publications. I could not be sure just which ones were included in this particular package.

Q.—Doctor, between the time of the letter which you wrote in June 1934 and this letter in March 1935, what additional

information had you had with reference to the Ross-Loos Clinic? *A.*—None that I can recall at the moment.

Q.—Now, when you received these various inquiries which we have just been reading, Doctor, did they induce you to make any investigation of the Ross-Loos Clinic for or on behalf of the American Medical Association? *A.*—No, sir.

Q.—Did the American Medical Association instigate any investigation of the Ross-Loos Clinic? *A.*—Not to my knowledge.

Q.—More particularly, did your bureau? *A.*—I made an investigation purely on my own initiative to learn what was being done by the Ross-Loos Clinic.

Q.—Was that in 1932, which you spoke about? *A.*—Yes.

Q.—What was the character of investigation made at that time? *A.*—I called at the Ross-Loos Medical Clinic where I was received very cordially. I met Drs. Ross and Loos and a considerable number of the staff. I was shown the clinic building and the facilities used for diagnosis and treatment of patients, to acquaint me with the methods and personnel of the Ross-Loos medical group.

Q.—Was that particular visit to that group made for the purpose of investigating that group, or was it routine, or what? *A.*—It was a routine visit made very shortly after the organization of the Bureau of Medical Economics for the purpose of collecting information and building up a source of material for the bureau.

Q.—What other groups did you visit in that same year, if any? *A.*—I visited groups in Minneapolis, Fargo, Bismarck, Glendive, Montana, Billings, Spokane, Seattle, Tacoma, San Francisco, Los Angeles, San Diego—

Q.—That's enough; what purpose did you have in making this trip around to these various groups in these various cities? *A.*—Nothing, except to secure information; the facts as to the ways in which medical groups were being operated.

Q.—And what use did you put the information to? *A.*—Later on we secured some additional information by mail and published a separate publication.

Q.—And what action did the American Medical Association take other than the publication that you just mentioned of the information? *A.*—None whatever.

(The witness identified a letter to Mr. James H. Baker, executive secretary Hennepin County Medical Society, Minneapolis.)

"Dear Mr. Baker:

"The Kansas City Industrial Hospital Association agreement with the Butler Manufacturing Company is but another example of similar types of contract practice that exists in other parts of the United States. Patients are not given freedom of choice of physician but must accept the physician furnished by the Industrial Hospital Association. The agreement states that members may at their own expense call or employ their own physician. Nothing is said as to the manner in which hospital care will be provided, although it is inferred that beneficiaries must be taken care of in hospitals of the Association in the event hospital care is necessary.

"This type of organization has been brought to the attention of the medical profession on several occasions. It is one which, in my opinion, ought to be discouraged.

"Under separate cover I am sending you several copies of our reprint 'New Forms of Medical Practice,' in which several types of this form of arrangement are discussed. "Sincerely yours,"

Q.—Now, Doctor, at the time you wrote this letter, back in April 1935, had you information in reference to this Kansas City Industrial Hospital Association? *A.*—Some information regarding the Kansas City Industrial Hospital Association had been sent to me by Mr. Baker; on the basis of that information, which as I recall it, was a rather brief pamphlet, I made these comments.

Q.—You stated in there:

"This type of organization has been brought to the attention of the medical profession on several occasions."

Again you state that it was similar to other forms of contract practice that existed in other parts of the United States. What did you mean by that? *A.*—Forms of contract practice that existed in various parts of the United States for many years; but there seems to have been a concentration of contract practice of a low type in certain sections, some in West Virgina; some in the State of Washington, and some in Oregon; and on the basis of the performances of these types of contract practice I believed that those particular types ought to be discouraged.

Q.—Now, why do you think that the type which you said was of low form—will you tell us what the form was and why you said it should be discouraged? *A.*—Contract practice, group and individual, were organized to provide a certain amount of service under contract at a very low cost. It was the custom for others, individuals or groups, to organize similar services with contracts to provide medical care or hospital care, or both, offering either the same amount of service for less money, or more service for the same amount of money. In some cases this competition, if it can be called that, or solicitation, went from bad to worse by constantly lowering the quality of medical care offered. I could give you some examples; some of the bad features.

Q.—Well, give us an example of the bad features so we will know in detail. *A.*—I refer to such an example as the amputation of a man's arm because, instead of carrying the man through to the reasonable—

Mr. Lewin (interposing):—Excuse me. Is he talking about the Ross-Loos Clinic?

Mr. Leahy:—No.

The Witness:—No. The reasonable restoration of that arm to function because it would require less time than the process of treatment and rehabilitation.

By Mr. Leahy:

Q.—Now, in your experience, Doctor, where these what you call low forms of contract practice, what did you discover under the contract practice with reference to such matters as you have just described? Were they indulged in or were they not? *A.*—In different parts of the country?

Q.—Yes. *A.*—They were; a large number of such organizations all over the country.

Mr. Leahy:—On the stationery of the Academy of Medicine of Cincinnati, Cincinnati, dated March 2, 1936, to Dr. Leland:

U. S. EXHIBIT 277

"The Academy of Medicine of Cincinnati is confronted with the following problem:

"Dr. George H. Cook, after some service with the Ross-Loos at Los Angeles, is preparing to start such a clinic in Cincinnati. Some of the members of the Academy of Medicine whom he has approached have asked the Academy whether an association with this clinic will jeopardize their standing with the Academy. The Executive Council of the Academy has ruled that this question must be answered by the entire County Society. This will be brought to a vote on Tuesday, March 10. Have you any information about this clinic or have you any experience which will guide us in handling this matter?

"The Executive Council will meet on Friday afternoon, March 6th, and I would appreciate hearing from you by that time if possible.

"Thanking you in advance for any information you can give us, and with very best wishes, I am

"Sincerely yours,
"Edward D. King, President."

By Mr. Leahy:

Q.—Doctor, have you replied to that letter? *A.*—This is a carbon of the reply which I made.

Mr. Leahy:—That's numbered 276 and runs to Dr. King, President of the Academy of Medicine of Cincinnati:

U. S. EXHIBIT 276

"This is to acknowledge receipt of your letter of March 2 relative to the formation of a clinic similar to the Ross-Loos Medical Group in Los Angeles.

"The effect of association with such a group by members of the Academy of Medicine of Cincinnati must be determined by the Academy, which has the original jurisdiction over the ethical conduct of its members."

By Mr. Leahy:

Q.—Doctor, why did you write that to Dr. King? *A.*—Well, because it's true.

Q.—Did you have anything to do with the ethical conduct of members of the Academy in Cincinnati? *A.*—Only so far as I might discuss the matter with the secretary or some member of the Academy. I had no authority nor jurisdiction over the members of the Academy of Medicine of Cincinnati.

Q.—For instance, if the Academy of Medicine of Cincinnati wanted to start a clinic, what jurisdiction did your bureau have over it? *A.*—Not a particle.

Q.—What jurisdiction did the American Medical Association have over it? *A.*—Nothing.

Q.—In other words, was the Academy entirely independent of you and the American Medical Association, anything it wanted to do? *A.*—Yes, sir.

"I believe that you should bear in mind that the press, which has socialistic leanings, has energetically taken up the cudgel for the Ross-Loos Medical Group."

Q.—Now, what did you mean by that statement, Doctor, when you said: that the press which had "socialistic leanings"? *A.*—Well, I think many of us have seen certain publications that have a very liberal view and that have from time to time pub-

lished articles and have assumed the attitude that the socialization of medicine would be a good thing for the people and for the profession of the United States.

Mr. Leahy:

"An attempt is being made to show that the Ross-Loos method is the most desirable method of providing medical care.

"I believe that in the discussion of this matter, your Executive Council and the membership of the Academy as well, should bear in mind the Ten Principles adopted by the House of Delegates at the Cleveland Session in 1934, as a measure of the necessity for, and the method of providing medical services. For example, the 3rd Principle states, 'Patients must have absolute freedom to choose a legally qualified doctor of medicine, who will serve them from among all those qualified to practice and who are willing to give service.' Since I do not have before me the details of the proposal by Dr. George H. Cook, I do not know whether his plan contemplates such a freedom of choice of physician.

"Again, the 8th Principle states, 'Any form of medical service should include within its scope all legally qualified doctors of medicine of the locality covered by its operation, who wish to give service under the conditions established.'

"Under separate cover, I am sending you a copy of the Special Report of this Bureau entitled, 'Medical Service Plans,' adopted by the House of Delegates at the Atlantic City Session. However, I am calling your special attention to these two principles.

"There are other factors which must be considered in examining any proposal to supplement the regular practice of medicine. In many instances these factors may not be apparent in the proposals themselves, but develop later in the operation of the scheme. I refer particularly to the quality of medical care and other methods by which subscribers or participants are obtained. In many schemes which have come to my attention, the amount charged for the medical care has been so small that there could be but one outcome—a reduction in either the amount or the quality of the medical services given, and in many instances, both these factors are involved. The manner of securing subscribers involves a practical application of the Principles of Medical Ethics, especially as these principles pertain to solicitation and unfair commercial competition.

"It is my understanding that the Ross-Loos Medical Group was composed of a number of very competent physicians."

By Mr. Leahy:

Q.—Did you believe that when you wrote it, Doctor? *A.*—I did.

Mr. Leahy:

"As far as I know, the quality of medical care given seems to be good. I am unable to give you all the details of the operation of this medical group or their methods of securing subscribers. However, I am enclosing a copy of an article which appeared in the Los Angeles City Employees Magazine. I am also enclosing a copy of a pamphlet of Information for Subscribers of The Ross-Loos Medical Group.

"It is my further understanding that the Ross-Loos Medical Group in Los Angeles entered into contracts with certain groups of municipal employees and others, under the terms of which medical services would be furnished by the members of the Ross-Loos group for certain stipulated sums. Furthermore, it is my understanding that each member of the groups concerned was required to pay a certain amount each week or month, and that this sum would be used to pay the cost of service rendered by the Ross-Loos clinic. I am informed that the Los Angeles County Medical Association objected to the operation of this plan, by the Ross-Loos group, and the charges were finally preferred against Doctors Ross and Loos. These charges were substantiated by the Council of the Los Angeles Medical Association, and on appeal, the California Medical Association upheld the action of the Los Angeles Medical Association whereby Doctors Ross and Loos were expelled from membership. This case was appealed to the Judicial Council of the American Medical Association. The decision of the Council may be found in THE JOURNAL of Jan. 25, 1936," the volume stated. "You will note however, that the Judicial Council decision expresses no opinion as to the guilt or innocence of the appellants in connection with any unethical practices alleged and charged against them.

"If at any time you believe I may be of some assistance to you, I shall be pleased to help to the limit of my ability."

By Mr. Leahy:

Q.—Doctor, when you enclosed a copy of the information for subscribers of the Ross-Loos Medical Group, have you any recollection now what that copy was? *A.*—No, I do not.

Q.—Have you any recollection now as to what you referred to when you stated, "I am sending you a copy of the Special Report of this Bureau entitled, 'Medical Service Plans'"? *A.*—Yes, sir.

Q.—What were they? *A.*—That was a report, special report of the Bureau, as I recall it, published in 1935, I believe, listing the service plans which had come to our attention throughout the United States, in the form of state medical society plans, operating and proposed; county medical society plans; and the various classifications of services which they gave, either for indigents or for low-income groups; or they were merely for collecting bills: in other words, postpayment plans or prepayment plans.

Q.—Were those forms which you state you enclosed to the director of the Academy factual in nature, informative, or were they recommendations contained therein, or what type were they? *A.*—They were factual, informative, and offered some suggestions or discussion of the principles involved in organizing and operating various types of plans.

Q.—At that time had there been any plans for the prepayment of cost of medical care? *A.*—Yes.

Q.—Do you recall how many were in existence? *A.*—Well, at that time there were very few operated by medical societies. There were plans being operated by groups of different kinds. Perhaps they might be designated as either consumer or producer prepayment groups, but there were only a few throughout the country.

Q.—Now, Doctor, there seems to be a series of letters here between you and a Mr. R. A. Swink.

Mr. Leahy:—Exhibit 279 has just been identified as a letter from Mr. Swink, the Executive Secretary, to Dr. Leland, on the Academy of Medicine of Cincinnati letterhead:

U. S. EXHIBIT 279

"Some days ago Dr. Edward King, President of the Academy, wrote you for some information pertaining to the Ross-Loos Clinic at Los Angeles. We very much appreciated the information furnished by you.

"In order that you might be acquainted with what has occurred here recently, I am enclosing a carbon copy of a letter sent to Charles S. Nelson, executive Secretary of the Ohio State Medical Association, in which a fairly complete statement is given of just what has occurred to date. I feel certain you would be interested in knowing of this action.

"If you have any special pamphlets, or can give me any other references that would enable us to make a more complete statement of organized medicine's viewpoint on the whole insurance scheme, I would like very much to have it.

"Yours truly,
"R. A. Swink."

Mr. Leahy:—The enclosure is dated March 19 and numbered 280, on the same stationery head, directed to Nelson:

U. S. EXHIBIT 280

"Last fall Dr. George H. Cook, a graduate of the University of Cincinnati, but not a member of the Academy here, made it known to some of the members of the Council and to others, that he had just returned from Los Angeles, where he had spent some months getting complete information on the operation of the Ross-Loos Clinic. He stated that it was his intention to organize a similar group in Cincinnati.

"Reports of his activities were heard from time to time, mostly in the form of rumors, until early in February of this year when a letter was received from him by Council, together with a prospectus of his proposed group. In his letter, he asked Council to let him know what attitude would be taken toward members of the Academy who might become members of his group.

"Immediately upon receipt of this letter and prospectus, the entire matter was referred for study to the standing committee on the Cost of Medical Care, of which Dr. Albert H. Freiberg is chairman. After many hours' consideration covering several meetings, this committee recommended to Council that it should reply to Dr. Cook by saying that a request such as he had made, could be considered only when presented by a member of the Academy; and secondly that if such a request is later made by a member, it would then be advisable for Council to call a special meeting of the Academy, so that the entire membership could participate in the discussion and have a final vote as to the policy of the Academy in respect to this matter.

"These recommendations were adopted by Council and Dr. Cook was accordingly notified of the action. Within a few days thereafter, a letter was received from Dr. E. E. Rhoads, a member of the Academy, stating that he was seriously considering the invitation to become a member of Dr. Cook's group and asking whether 'belonging to the George H. Cook Medical Group will in any way jeopardize my standing in the Academy.' Upon receipt of Dr. Rhoads' letter, Council called a special meeting and decided to make consideration of this matter a special order of business to come before the Academy at its regular meeting on March 10, 1936. A copy of notice sent to all members is enclosed herewith.

"Interest in this matter attracted a large attendance at the meeting on March 10. A rough count indicated that there were approximately 325 to 350 members present. As a result of thorough discussion on the part of Council at two special meetings prior to this meeting of the entire Academy, Council prepared a statement to be read by the President, Dr. King, by way of introduction to the entire matter and a statement of the issues involved.

"After giving a brief history of the events leading up to the calling of the meeting, Council called attention in its statement to Article VI, Section 2 of the 'Principles of Ethics' of the A. M. A., and then informed the Academy that, in the opinion of Council, the thing for the members to do was to answer certain questions, with the understanding that those answers would become the rules which Council would feel obliged to enforce in a situation that might arise as suggested in Dr. Rhoads' letter. The questions on which Council desired an answer were these:

"1. Does practice under a prepayment group plan such as is being here proposed, and which does not include all of the legally qualified physicians of the community, but restricts itself to a small group, constitute a violation of Article VI, Section 2 of the 'Principles of Ethics' of the A. M. A.?

"2. Shall membership in the Academy of Medicine of Cincinnati be withheld from physicians who are practicing in violation of this rule?

"3. Shall violation of this rule by a member of the Academy constitute sufficient reason for the termination of his membership?

"It is not necessary for me to relate the entire discussion that occurred at that point other than to say that a motion was immediately made by Dr. Robert Carothers to the effect that practice under a prepayment group plan such as was being proposed, does constitute a violation of Article VI, Section 2 of the 'Principles of Ethics.' That motion was by way of saying yes to question no. 1. After prolonged discussion on the motion, in which only one member, Dr. Samuel Iglauer, spoke in opposition to the matter, a rising vote was taken and practically every one present voted in favor of the motion. There were 3 or 4 who voted against the motion and possibly 15 or 20 others who did not vote either way.

"With the first motion disposed of, motions on the other two questions were immediately put and voted on, with similar results.

"The enclosed clipping from the *Enquirer* on the morning following the meeting is indicative of the reports appearing in all the newspapers of the action taken. The next day after that is when the editorial appeared in the *Enquirer* entitled, 'A Danger Involved,' and in which the Academy was accused of 'boycotting' any physician who undertakes to give medical service on a group basis.

"I trust that this rather lengthy review of the situation will be of interest to you and if you have any suggestions or comments to make, I am sure, Council will be very glad to receive them.

"Yours truly,
"R. A. Swink."

By Mr. Leahy:

Q.—Doctor, what other information did you have with reference to what transpired than this letter of Mr. Swink's to Dr. Nelson, a copy of which he sent to you? *A.*—No other.

Q.—What did you have, if anything, to do with the preparation of these questions? *A.*—Oh, nothing.

Q.—Which were answered? *A.*—Nothing.

Q.—Or with the calling of any meeting of the Council or a meeting of the Academy? *A.*—Nothing whatever.

Q.—Did you know that either was being held, or anything about it, prior to the receipt of this copy of this letter? *A.*—I can't recall whether any other letters had come announcing the holding of a meeting or not, but at the present time I would have to say no.

Q.—What advice, if any, did you try to give to Mr. Swink or Mr. Nelson or to Dr. King with reference to this matter? *A.*—Nothing at all.

Q.—Was it or was it not a matter of complete jurisdiction of the local Society entirely? *A.*—It was in their jurisdiction completely.

Q.—And this reply of March 25, 1936, numbered 278, which is a carbon of the original, is, I think you stated, in reply to the letter which you had received from Mr. Swink? *A.*—That's right.

Mr. Leahy:—Dated March 25, to Swink:

U. S. EXHIBIT 278

"I am greatly obliged to you for your letter with the enclosed carbon copy of your communication to Mr. Nelson. I am personally of the opinion that the Academy of Medicine of Cincinnati proceeded in a wise course on the matter under consideration.

"This Bureau is now preparing a publication on 'Economics and the Ethics of Medicine.' This publication will probably bear more directly than any other one we have on the question under discussion, however, I am unable to give you the date at which this will be ready for distribution. In the meantime, I am enclosing some publications of the Bureau in the hope that they may be of some help to you."

By Mr. Leahy:

Q.—And when you stated, I am personally of the opinion that the Academy acted wisely or in a wise course, to what did you refer? *A.*—I referred to the procedure that they had adopted in arriving at the end. They had made an investigation, they had framed their own questions, and they had put them to the vote of their own membership, and the membership had expressed itself.

Q.—And with that expression what interest had you? *A.*—An academic one.

Q.—Any advice or anything of that kind? *A.*—Nothing at all.

Mr. Leahy:—This is on the Medical Society of the District of Columbia stationery, and it is dated June 5, 1937, over the signature of Dr. Conklin, and addressed to Dr. Leland:

U. S. EXHIBIT 259

"I am enclosing herewith a plan that has recently come to our attention for development of prepayment medical service in governmental bureaus. The potentialities of such a plan, if and when it is put in force in the capital city, should be readily understood.

"With hopes that I will have the pleasant opportunity of seeing you during the coming week, I am," Postscript:

"I regret that I was not 'at home' when you called at my office recently. I am hoping for better luck next time."

By Mr. Leahy:

Q.—Well, have you an independent recollection now of having received a plan called "Federal Employees Cooperative Medical Service, Inc."? *A.*—I recall receiving it, but I can't recall the contents of it.

Q.—Now, looking at the letter again, it states:

With hopes that I will have the pleasant opportunity of seeing you during the coming week,"

Was there any function which was to occur during the coming week? *A.*—That doesn't mean anything to me now.

Q.—When was the convention of the A. M. A. held in 1937? *A.*—It was in the early part of June, at Atlantic City. Perhaps that refers to the meeting of the American Medical Association.

Q.—Now, the postscript there states:

"I regret that I was not 'at home' when you called at my office recently. I am hoping for better luck next time."

Have you any independent recollection now of having called at his home or at the office? *A.*—Oh, I believe that "at home" in quotations means his office.

Q.—His office. Yes. *A.*—I called at Dr. Conklin's office several times, but I don't know whether it was close to that date or not.

Q.—At all events, have you any independent recollection now of having called, to find that he was out? *A.*—Yes, I remember that I called once, and Dr. Conklin was out.

Q.—What connection had that call, if any, with Group Health Association? *A.*—I don't connect it at all with Group Health Association, because I called on the secretary several times as a matter of courtesy and interest, and on matters of medical society affairs, having nothing to do with Group Health Association.

Q.—Now, this carbon copy is dated August 18, Doctor. The letter which Dr. Conklin wrote to you was dated June 5, 1937. I notice you state in the carbon, "Since your letter arrived just as I was leaving the office for my vacation, I have had no opportunity to answer it until today." Had you taken your vacation at that time? *A.*—I had taken my vacation, and the convention of the American Medical Association had also intervened, and I believe that I had been out—away from the office, as well, on some field work.

Mr. Leahy:—Dated Aug. 18, 1937, numbered 260, in evidence, for the prosecution:

U. S. EXHIBIT 260

"Since your letter arrived just as I was leaving the office for my vacation, I have had no opportunity to answer it until today.

"The suggestion which I made at the committee meeting is, in my opinion, a very simple one, involving nothing but cash payments to those who wish to participate. It is based largely on the type of arrangement that has been in effect for many years and operated by health and accident insurance companies."

By Mr. Leahy:

Q.—To what are you referring in that paragraph, Doctor? *A.*—I am referring to the principle of cash payments made by health and accident insurance companies on the basis of a contract between them and their policyholders, by which they agree to pay in cash directly to the insured the amount of any claims that are made against the company under a contract.

Q.—Well, I notice you state, "The suggestion which I made at the committee meeting." *A.*—I made the suggestion at the committee meeting, which was in July of 1937, the suggestion to the Medical Society that they might take under advisement the idea of organizing a cash indemnity plan which would be similar to the cash indemnity plan operated by health and accident insurance companies, if they could qualify under the laws of the District.

(Here was described the Mutual Benefit Insurance Plan as shown in previous printing of this letter.)

MARCH 18—AFTER RECESS

(The Court ruled that testimony on the quality of medical service rendered G. H. A. could be introduced to refute the Cabot testimony.)

TESTIMONY OF DR. RICHARD B. PRICE

DIRECT EXAMINATION (RESUMED)

By Mr. Leahy:

Q.—Doctor, I believe this morning when you were asked to step aside for a few moments I was about to ask you the question as to your experience while you were at Group Health Association and on its staff of physicians, and more particularly during the year 1938 and up to the 20th day of December

thereof. What was your experience as to the quality of medical care which Group Health was able to give to its patients? *A.*—I found that it was not the care that I wanted to give patients. In other words, I did not think that it was adequate medical care.

By Mr. Leahy:

Q.—Why do you say, Doctor, that it was not the adequate medical care that you thought patients should receive? *A.*—To express it in a word, I would say that it was an attempt to practice medicine wholesale; and I think that adequate medical care would be the opposite. In other words, personal service is the keynote of adequate medical care.

Q.—What ability had you personally to give personal service to the patients that you had in Group Health? *A.*—Very limited.

Q.—What was that due to? *A.*—Well, many factors. My final opinion was that it was due to the type of set-up, rather than to any other possible factor. There were other factors, of course.

Q.—First, with reference to the type of set-up: to what do you refer? *A.*—Well, it was an organization trying to take the place of the family physician, of the personal physician. That was the fundamental trouble with it.

Q.—In what respect did you find that that type of set-up could not replace the family physician? *A.*—For instance, if I were sick in the middle of the night and would want medical care—if I were a member of an organization such as that and called for medical care and a doctor would come to see me who was not familiar with my case, and I would be too sick to go into details, I would not have the confidence in him that I would have in a doctor who knew me. If I may take just a minute or so—I believe we are not as individuals just the sum of our heart and lungs and arms and legs; we are more than that. In other words, personality is more than just the sum of the things that we can determine by x-ray examination. If you are sick it is more important to me as a physician what you think about yourself than the way your heart sounds.

Q.—In your own experience, Doctor, did you find that upon visiting patients on whom you called those patients had had other doctors than yourself? *A.*—They had; yes. That is correct.

Q.—And with reference to the number of patients whom you were called upon to treat, what had that number to do with reference to the adequacy of care which you could render to them? *A.*—I had to attempt to care for more than I could give proper care to.

Q.—Do you recall whether there were any patients at the hospital who were asking or requesting operations which could not be granted? *A.*—There were.

Q.—Do you recall whether there were many or few? *A.*—During the year 1938?

Q.—Yes. *A.*—I should say that nearly a hundred patients had been promised operations and were not given them during that time.

Q.—To what was that due? *A.*—Well, I believe the chief reason they were not giving them was because the organization did not feel they had the money to pay for the hospitalization, and so forth. In other words, they were running—

Mr. Lewin:—We object to what the Association felt. He has got to testify to his knowledge.

THE COURT:—Yes.

By Mr. Leahy:

Q.—Did you discuss that in any way with the board of trustees? *A.*—I talked to the Medical Director about it many times.

Q.—What did he say?

Mr. Lewin:—Objected to as hearsay.

Mr. Leahy:—Oh, no.

Mr. Kelleher:—Let us have the Medical Director here if they want that testimony. Put it in through the right man.

Mr. Leahy:—If your Honor please, this is the chief physician in charge of all the outfit.

THE COURT:—I think that should be limited, Mr. Leahy, to go no further than to show any instructions which might have been given by Dr. Brown to his subordinates in the handling of such cases. I do not think it should go into the question of the opinions or thoughts that Brown may have had in a general sort of way.

Mr. Leahy:—No; I will not do that, your Honor.

THE COURT:—You see my distinction?

Mr. Leahy:—I see the distinction, your Honor; yes. And I will adhere to it.

THE COURT:—Limit it to that, then.

By Mr. Leahy:

Q.—Doctor, did you have any patients of your own at the time who were seeking operations and could not get them? *A.*—I don't know what to say about "my own." I did not have any patients whom I considered my own.

THE COURT:—You mean, Group Health patients?

Mr. Leahy:—Yes, sir.

By Mr. Leahy:

Q.—Any Group Health patients whom you treated? *A.*—Yes.

Q.—Did you discuss the failure to give operations as to those? *A.*—Yes.

Q.—Did you talk it over with the Director? *A.*—Yes.

Q.—What did he say to you about those operations? *A.*—He said that it would be necessary to stall them off—which he did.

Q.—Did you come in contact with physicians in the District of Columbia who were members of the Medical Society of the District of Columbia? *A.*—Yes, sir.

Q.—What were your relations with those doctors with reference to consultations or assistance or cooperation in regard to your patients of Group Health? *A.*—The doctors whom I met, members of the Society, were without exception very friendly to me, kind in their attitude.

Q.—What evidence did you find among those members of the Medical Society with whom you discussed the affairs as to interfering with you in your practice with reference to Group Health patients? *A.*—They did not interfere with me.

Q.—Did you have occasion at any time to seek the advice of members of the Medical Society with reference to the condition of any patients of Group Health that you were treating? *A.*—Yes, sir.

Q.—What was the result of that? *A.*—Well, I had occasion to ask consultation with one of the leading heart specialists of the country, I believe, Dr. Thomas Lee, in two cases.

Q.—What did Dr. Thomas Lee do? *A.*—Dr. Thomas Lee visited the patients.

Q.—What did he do with respect to you? *A.*—Sent me reports of what he found.

Q.—Do you recall, Doctor, how many patients a day, on an average, you would see at Group Health personally? *A.*—In 1938?

Q.—Yes. *A.*—I saw as many as 60 a day. That was not the average, however.

Q.—In your judgment, Doctor, can a physician render adequate medical service to as many as 60 patients a day? *A.*—I cannot; no, sir.

Q.—Do you recall from your observation down there whether or not the other doctors on the staff were similarly at work? *A.*—They were all over-worked.

Q.—Were you engaged at any time in making any house calls for G. H. A.? *A.*—Yes.

Q.—What patients would you be called upon to see on house calls? *A.*—All types of patients except obstetric cases and pediatric cases.

Q.—How many other doctors were there who were attending patients in Group Health while you were there? In 1938, I mean. *A.*—I believe there were at the end of 1938 seven or eight; something like that.

Q.—Do you recall now whether a patient who was seen at home on a house call always had the same doctor? *A.*—No. They did not have the same doctor.

Q.—What effect, Doctor, does that have on rendering adequate medical care to a patient?

Mr. Kelleher:—Objected to as repetitive, your Honor. He has already covered it.

Mr. Leahy:—He said that doctors would be called upon to see patients at Group Health Association who had been attended by other doctors.

THE COURT:—What was your question?

Mr. Leahy:—My question was, What was the effect that that would have on a patient?

THE COURT:—I think he made some reference to that. If it is not clear in your mind, he may answer.

A.—The doctor making a call on a patient who had been under another doctor's care would not have the patient's record available; he would not know what the other doctor had found, would not know what treatment the other doctor was giving him, and the patient, therefore, would not have the confidence in the new doctor that he would if one doctor had had the continuity of the case.

By Mr. Leahy:

Q.—What did you find, Doctor, with reference to the maintenance of the doctor-patient relationship in Group Health Association? *A.*—Well, that was lost, because we were attempting to practice medicine wholesale, as I said before.

CROSS EXAMINATION

Mr. Lewin:

Q.—Doctor, you said that none of the members of the District Medical Society interfered with your practice while you were with Group Health. Was not that your testimony? *A.*—I believe—did I say, interfered with it?

Q.—Yes. *A.*—Except for the cases that I mentioned.

Q.—When you joined Group Health did you not know that Group Health would have to make outside consultations in dangerous cases? *A.*—Well, I had not given it any thought, but it is true that they should, certainly.

Q.—As a matter of fact, did you not have a very serious heart case, a Mr. Bradley? *A.*—I mentioned that I had heart cases, but I would like to be excused from giving the patients' names and the diagnosis.

THE COURT:—I do not think that you should go into the personal side of it. Do not identify the cases.

By Mr. Lewin:

Q.—Did you not have a serious heart case, a man over 40 years of age? *A.*—I had heart cases; yes; 2 heart cases.

Q.—Had you been treating him for heart trouble? *A.*—Yes.

Q.—Was his case rather acute? *A.*—Yes, sir.

Q.—And that was while you were with Group Health Association in 1938? *A.*—That is right.

Q.—That was March of 1938, to be exact, was it not? *A.*—I don't recall the exact date, but it was in 1938.

Q.—Did you have an electrocardiograph at the Group Health Association? *A.*—Yes.

Q.—Did you have an electrocardiograph when you were in private practice in Delaware? *A.*—Yes; I had access to one.

Q.—Did you have one in your own office? *A.*—I had one in the office of the Dupont Company with which I was associated.

Q.—But when you were in private practice in Delaware did you have one? *A.*—I did not have one in my office.

Q.—But you did have one at Group Health and you did have one when you were on salary with Dupont; is that right? *A.*—Yes.

Q.—You used this electrocardiograph and that indicated that this gentleman was very sick, did it not? Is that right? *A.*—Well, now, as to an electrocardiograph, there is a good deal of discussion as to how much that will indicate. But I will grant that the man was sick. I do not want to say that the electrocardiograph will make a diagnosis. It takes a doctor to make a diagnosis.

Q.—But you felt the need of a consultation by an eminent heart specialist? *A.*—Yes.

Q.—And you turned to a member of the District Medical Society? *A.*—Yes.

Q.—And that gentleman's name was Dr. Thomas Lee? *A.*—Yes, sir.

Q.—Were you able to get a consultation with him? *A.*—May I express it in a few words?

Q.—Won't you answer the question? *A.*—I cannot say no, and I cannot say yes.

Mr. Leahy:—Don't argue with him.

Mr. Kelleher:—Nobody is arguing with him.

By Mr. Lewin:

Q.—Were you able to get a consultation with him?

Mr. Richardson:—He answered it.

A.—I called Dr. Lee on the telephone and asked him about the same case and he said, "Doctor, I would like to see the case with you, but there is some question, which I hope will be settled soon, about the legality of Group Health. Until that is settled I would rather see the patient myself and send you a report."

By Mr. Lewin:

Q.—Is that all he told you? *A.*—At that time.

Q.—Did you ask him to come in consultation with you? *A.*—I asked him to see the patient. I am not sure whether I asked him to see the patient with me or not. But whether I asked the question directly, as to whether or not he would see the patient with me, his answer was as I have told you. I had not even met Dr. Lee.

Q.—Did you ask him to come in consultation with you over that case? *A.*—I can't answer that yes or no.

Q.—Did you testify before the grand jury of the United States that returned this indictment? *A.*—I beg your pardon?

Q.—Did you testify before the Grand Jury of the United States? *A.*—I did.

Q.—Were you asked to tell about this case that I am asking you about now? *A.*—That is right.

Mr. Leahy:—I suggest that he might show it to the witness to see if that refreshes his recollection.

Mr. Lewin:—I am sure that his Honor will permit me to conduct this examination in this way, which is absolutely proper.

THE COURT:—I do not know. I am opposed to turning generally to testimony before a grand jury. That is wholly in the discretion of the court, and it is only when it is of sufficient importance to be in the public interest that I could justify it. Otherwise it would break down the secrecy of the grand jury altogether. You can generally use grand jury notes of testimony. I am opposed to the general use of such notes in this case. If you will pass it up to me I will pass upon it.

(Counsel for both sides approached the bench and conferred with the Court in a low tone of voice.)

(The discussion concerned the right to use the transcript of the grand jury testimony in questioning the witness.)

By Mr. Lewin:

Q.—As a matter of fact, you testified before the grand jury on Oct. 31, 1938, did you not, toward the end of your association with Group Health Association? Is that right? *A.*—So far as I remember. I see that it is that date.

Q.—And that is after you had been with Group Health Association something over ten months; is that right? *A.*—That is correct; yes.

Q.—I point to this answer which you gave there and ask you if that refreshes your recollection as to whether or not you called Dr. Lee in consultation with you? *A.*—I should say that I did.

Q.—You told us that Dr. Lee expressed some doubt as to the legality of Group Health Association. Was that your testimony? *A.*—That is what he said on the telephone. It was not that he expressed the doubt. He said there was a question, but I don't think he had any doubt about it.

Q.—Did he not say that he would be glad to come in consultation with you, but he could not do it because you were a Group Health doctor and it was a Group Health patient? *A.*—That is correct.

Q.—Did he not give the reason for that the instructions of the local District Medical Society? *A.*—He said they questioned the legality of it.

Q.—Did he not say that he had been instructed by the local Association not to hold consultations with any doctors on the staff of Group Health? *A.*—That is right.

Q.—Is that what he said? *A.*—That is correct.

Q.—When you testified before the grand jury did you say anything about his saying that somebody had doubts as to the legality of Group Health? Look at that and refresh your recollection (handing transcript to the witness).

Mr. Leahy:—I object.

THE COURT:—Objection sustained.

By Mr. Lewin:

Q.—As a matter of fact, he did not consult with you, did he? *A.*—Not with me; no.

Q.—He saw the patient independently, did he not? *A.*—Yes.

Q.—And that was abnormal procedure, was it not, when you had asked a doctor to come in consultation with you? *A.*—Well, it is not exactly the usual view of consultation.

Q.—What is the usual view? *A.*—I suppose the very meaning of the word would be coming together.

Q.—Is there any advantage in that? *A.*—There is in many cases.

Q.—But you were deprived of that advantage in this case, were you not? *A.*—That is correct, to that extent.

Q.—So to that extent you were interfered with by the District Medical Society, were you not?

Mr. Leahy:—I object.

THE COURT:—That is purely argumentative.

Mr. Lewin:—He gave that kind of a conclusion in response to Mr. Leahy.

By Mr. Lewin:

Q.—Did you not have another patient also seriously ill with heart trouble? *A.*—That is right.

Q.—An old lady over 60 years of age? *A.*—Yes.

Q.—And was she not so sick that you thought she was going to die in your office? *A.*—In the office of Group Health Association.

Q.—And did you not try again to get Dr. Lee in consultation? *A.*—I did; I called him again.

Q.—Did you not get the same response from him, that the District Medical Society would not let him come? *A.*—The response was the same as the other time.

Q.—Have I correctly characterized what the response was, that the District of Columbia Medical Society had a rule which forbade him to have any consultation with Group Health doctors? *A.*—He did say that the District Society questioned the legality of Group Health; I am pretty sure, both times. He said he did not have anything against me personally; there was not anything personal at all. He simply said that he hoped the thing would be settled soon.

Q.—Did he not say in that case that the Medical Society still prevented him from having a consultation with you?

Mr. Leahy:—I object to this constant repeating, if your Honor please, and doing by indirection what your Honor has told him not to do directly.

THE COURT:—While I do not think Mr. Lewin so intended, it might be open to that objection.

Mr. Lewin:—It is simply a question of holding it in my mind. I want to be accurate about it. I might have transcribed this into notes, and there could not be any question about my using them.

THE COURT:—It is a little difficult to decide. Proceed.

By Mr. Lewin:

Q.—Will you answer that question? *A.*—Of course—would you mind repeating the question?

Q.—Did he not tell you in connection with this old lady's case that the Medical Society still prevented him from having consultation with you? *A.*—Yes.

Q.—Did he not say that he hoped matters would be straightened out so that you could have consultations in the usual way? *A.*—Yes, sir.

Mr. Richardson:—I would like to suggest that this alleged grand jury transcript be taken away from in front of counsel. He is simply reading from it and avoiding your Honor's ruling with reference to it.

Mr. Lewin:—I do not think I am.

Mr. Richardson:—Why not put it out of the way?

Mr. Lewin:—Why do you have any doubt about the authenticity of it? Why can I not read it?

THE COURT:—It is pretty difficult for the court to control that. Suppose it were some other paper that he was refreshing his recollection from: you could not object to it. Suppose he had copied it off from those pages to another piece of paper. The difficulty has arisen from identifying that as the report of the grand jury proceedings. That is where the mistake arose, not by the use of the paper itself.

Mr. Richardson:—Of course his producing it is not our fault; but having produced it and identified it, standing there and turning the pages and reading it leaves the impression that the grand jury testimony is being read to the witness.

THE COURT:—The mistake has been made in identifying those notes as particular notes. It is just one of those things that will happen. I cannot wipe that out.

By Mr. Lewin:

Q.—Is it not true that while you were with Group Health you had a number of other cases where you would have had the usual consultations but could not get them—let me change that—and could not have them because of this rule?

Mr. Leahy:—What rule?

Mr. Lewin:—The rule of the District Medical Society—just what Dr. Lee gave as his reason.

A.—I do not recall any. There may have been.

By Mr. Lewin:

Q.—Do you not recall other cases in which you would like to have had face to face consultations with specialists in the District of Columbia, members of the District Medical Society, if you could have obtained them? *A.*—I think there probably were.

Q.—Were you not blocked from obtaining them or trying to obtain them because of this experience which you had with Dr. Lee in those two cases? *A.*—I think I can say yes to that, in the same way.

Q.—You were with Group Health Association from what date to what date? *A.*—I testified this morning that I started in December 1937, with x-ray plates for them, without pay. I was not on their salary roll, but I was actually doing some work for them.

Q.—Were you still with them as late as Dec. 20, 1938, when this indictment was returned? *A.*—Oh, yes.

Q.—At that time were you a member of the American Medical Association? *A.*—Yes, sir.

Q.—Through what local society? *A.*—The Newcastle County, Delaware, Medical Society.

Q.—Had you not received some instructions from the American Medical Association at that time that you would have to change your membership to some other local society? *A.*—I do not recall that now; no, sir.

Q.—Would you like to have your memory refreshed? *A.*—I don't recall anything about it right now.

Q.—Let me show you this and see if it refreshes your recollection (handing transcript to the witness). Had you not had instructions from the A. M. A. that you must apply to the District Medical Society for membership if you wanted to retain your membership in the A. M. A.?

Mr. Leahy:—I object to that as immaterial and outside the scope of the direct examination.

Mr. Lewin:—I think it has something to do with the interest of this witness.

Mr. Kelleher:—And the interference with his activities, your Honor. Mr. Leahy asked the broad question whether there had been any interference with him while he was with G. H. A.

Mr. Leahy:—No, I did not. I asked the question about the District Medical Society.

THE COURT:—I will permit him to answer the question.

Mr. Leahy:—Exception, if your Honor please.

THE COURT:—You may answer.

The Witness:—I had a letter something about applying locally, but I do not think it said the District Medical Society.

By Mr. Lewin:

Q.—What did it mean by applying locally? *A.*—If I recall now, it was a ruling of the American Medical Association that a doctor away from his former place of practice more than a year should apply in his new locality for membership rather than to maintain his membership in the old location.

Q.—And your new locality was the District of Columbia, was it not? *A.*—Not my residence. Group Health was; yes.

Q.—Was not that the place where you were supposed to apply locally? *A.*—I could have either applied here or to the Alexandria, Virginia, Society, where I maintained a residence.

Q.—Did you apply to the Alexandria, Virginia, one?

Mr. Leahy:—I object as immaterial.

THE COURT:—Yes; I think it is immaterial whether he applied or not.

Mr. Lewin:—I have something in mind, your Honor, that I think will make it material.

THE COURT:—Step here and tell me about it.

(Counsel for both sides approached the bench and conferred with the court in a low tone of voice.)

(The discussion was on the bearing of the question. The Court sustained the objection.)

By Mr. Lewin:

Q.—When you testified in chief here about your dissatisfaction with Group Health practice did you mean to imply that there was anything, in your opinion, unethical in regard to Group Health practice? *A.*—I am not qualified to answer that question. There are so many standards of ethics that I do not feel qualified as an expert on that.

Q.—In your standards of ethics was there anything unethical in your relation to Group Health patients? *A.*—I cannot answer that, either.

Mr. Lewin:—May I refresh his recollection?

THE COURT:—I am not going to let you make general use of that record. I told you that.

Mr. Lewin:—I am simply using it to refresh.

THE COURT:—The question put to this witness was not whether things were ethical or unethical. The question was as to what opportunities it gave for good practice. That has nothing to do with ethics or lack of ethics. So I think it should be confined to that. In what ways, in his opinion, did it affect his ability to give good service.

Mr. Lewin:—I just wanted to be sure I understood what he meant by good and bad practice.

Mr. Leahy:—Ask him.

Mr. Lewin:—I am coming to that.

By Mr. Lewin:

Q.—As a matter of fact, throughout the whole period of 1938, from the time you joined Group Health Association until Oct. 31, 1938, were you not able to give better treatment to your patients, and superior treatment to your patients, while you

were with Group Health, than you were able to do in your private practice in Delaware? *A.*—No.

Q.—Let me see if I can refresh your recollection.

May I do that, your Honor?

THE COURT:—I think you may, for that.

(Mr. Lewin handed transcript to the witness.)

A.—In some ways, yes, but not in every way.

By Mr. Lewin:

Q.—Did you not believe in October 1938 that we, meaning Group Health Association, could give better medical care than could be given in private practice? *A.*—No; I don't believe that we could.

Mr. Lewin:—Now, your Honor, may I confront him more directly? I would like to show this to your Honor (handing transcript to the court.)

THE COURT:—You may let him see it.

By Mr. Lewin:

Q.—You have seen this portion of your grand jury testimony, have you not (indicating)? *A.*—Yes, sir.

Q.—What is your testimony since you have seen this answer to my last question? *A.*—I still think at the present time we could not give them as good attention.

Q.—What did you think while you were with them in October 1938, and throughout that whole period, from January 1938, to October 1938? What was your opinion then? *A.*—I did mention something about the patient's pocketbook, and so forth, that we did not have to worry about the patient's pocketbook. But, on the other hand, I feel certain now—

Q.—Now, wait a minute. I am asking you what you thought then. That is not responsive.

Mr. Leahy:—I object, if your Honor please. The proper thing to do is to say, "Were you not asked this question and did you not give this answer?

Mr. Lewin:—We have a right to get the answer from the witness.

THE COURT:—The question is that he has expressed his opinion now as to the effect of Group Health practice as related to his experience. That was general. Certainly he has not got to be confined to the opinion which he may have expressed at some other time. He may have changed his opinion. It is purely an opinion which may change.

Mr. Lewin:—I am not suggesting that he has not a right so to testify, but I do not think he has a right to do that in response to my question which was directed in 1938.

THE COURT:—I am afraid that we have lost your question in the melee. Suppose you put another question.

By Mr. Lewin:

Q.—In October 1938, were you not asked this question and did you not give this answer:

"What about the kind of treatment that you can give patients at Group Health as compared with the kind of treatment you could give patients in your private practice in Delaware?"

And did you not give this answer:—

Mr. Leahy:—I object to the use of this transcript, which your Honor has again and again called to counsel's attention. It does not do any good for your Honor to give a direction; he just simply walks over it.

Mr. Kelleher:—That is not a fair statement.

THE COURT:—I will permit him to ask the question. I have seen that answer.

Mr. Lewin:—I suppose you are now going to withdraw your remark?

Mr. Leahy:—No.

Mr. Lewin:—I thought you might be generous enough to do it.

THE COURT:—Come on, gentlemen. We have plenty of work to do here.

By Mr. Lewin:

Q.—Did you not give this answer to that question:

"Well, the treatment and care are superior here, because we have the association with other men in the various specialties and have complete and adequate laboratory facilities, and also because we can devote our entire time to medical work and not have to think about the patient's pocketbook and so on. So I believe we can give the patients better medical care."

What is your answer? *A.*—That I did say that; yes.

Mr. Richardson:—May we now inspect the transcript that counsel just read?

THE COURT:—Yes.

Mr. Kelleher:—May we approach the bench?

THE COURT:—Not on that. Counsel has the right to see it.

Mr. Kelleher:—All we mean is to be sure that the limitation is correctly expressed. They can see the part that is addressed to the witness.

THE COURT:—Yes.

RE-DIRECT EXAMINATION

By Mr. Leahy:

Q.—Doctor, going back to the talk you had with Dr. Lee, will you now give us to the best of your recollection just what Dr. Lee said to you on the telephone when you called him? What did you say to him, so that we will get the entire conversation. *A.*—I said that I am Dr. Price, on the staff of G. H. A. I had never met Dr. Lee—I have never met him yet; that I would like to have him see this patient if he would be kind enough to do so.

Q.—Did you describe the condition of the patient over the telephone to the doctor, to Dr. Lee? *A.*—I did.

Q.—What did Dr. Lee say then? *A.*—Dr. Lee said he would be glad to see the patient, but that until things were straightened out he would prefer seeing the patient himself, and sending me a report of his finding.

Q.—Did he say what matters were to be straightened out? *A.*—He said that there was a question of the legality of Group Health Association, the Association with which I was connected.

Q.—Do you remember now about what time of the year that was when you made this telephone call to Dr. Lee? *A.*—I believe it was, since my memory has been refreshed about the date by Mr. Lewin—that it was March 1938.

Q.—Was that the gentlemen who was described as being about 40 years of age, whose case you were drawing to the attention of Dr. Lee? *A.*—Yes.

Q.—Do you know whether Dr. Lee did see the patient? *A.*—Yes.

Q.—As soon as possible? *A.*—Yes.

Q.—And he sent you his full report? *A.*—Yes.

Q.—And the patient got better? *A.*—Yes.

Q.—Now, about the lady: Can you recall about when it was you called on the telephone about her? *A.*—I think it was in the summer of 1938; I am not sure about the month or the exact date.

Q.—And did you say that Dr. Lee repeated again in substance what he told you before? *A.*—Yes.

Q.—Did you describe the condition of the lady over the telephone? *A.*—Yes.

Q.—Did he talk with you about the condition as you described it? *A.*—Yes.

Q.—Do you call that consulting at all when you discuss over the telephone instead of being face to face with each other, the patient, conditions, and such things? *A.*—Yes.

Mr. Leahy:—He says the benefit of the face to face consultation was not given. I would like to have the witness testify on that point.

THE COURT:—He said he never saw Dr. Lee.

By Mr. Leahy:

Q.—But, Doctor, did you or did you not discuss over the telephone with Dr. Lee the condition of each of your patients? *A.*—Yes.

Q.—And did Dr. Lee express to you anything with reference to the condition of them? *A.*—He did; he went into full details about it; his finding.

Q.—Did he also visit the second lady, as soon as possible? *A.*—Yes.

Q.—And she got better? *A.*—Yes.

Q.—Now, referring to these questions asked with reference to the character and type of care, do you recall whether at any time shortly after October 1938, along about December 1938 or January, early January 1939, there came a time when you resigned from G. H. A.?

Mr. Lewin:—Objected to.

THE COURT:—That is not redirect examination.

Mr. Leahy:—Could I approach the bench?

THE COURT:—Yes.

(Counsel for both sides approached the bench and conferred with the Court.)

(After discussion the Court sustained the objection.)

By Mr. Leahy:

Q.—Doctor, you made an answer, I think, in response to one of the statements that there may have been some other consultation which I believe you sought or which you would have

sought, that in substance: Now, can you recall any other cases in which you called on any of the doctors over the telephone other than the two asked about? *A.*—No, sir.

Q.—You have no such recollection? *A.*—No.

Q.—And if any such case occurred it has made no impression on you? *A.*—No, it must have been a hypothetical rather than an actual case.

TESTIMONY OF PERCY S. BROWN

DIRECT EXAMINATION

Percy S. Brown, Boston, Mass., said he is the treasurer and trustee of the Twentieth Century Fund, and secretary-treasurer and executive director of the Good Will Fund. He has no official connection with Health Economics, Incorporated. It was supported by the Twentieth Century Fund. Its director was Mr. Rickcard. The witness said he is joint secretary and treasurer of the joint committee of the two funds, Twentieth Century and Good Will.

In response to subpoena he produced reports of the Auditor of the Twentieth Century Fund for three years, March 1, 1936, to Feb. 28, 1937, and for a similar fiscal year ending Feb. 28, 1938, and for the year ending Feb. 28, 1939; also audits by the same Auditor of the Good Will Fund for the period of time from the beginning of its operation, Dec. 20, 1936, to Dec. 31, 1938, and for the period Jan. 1, 1939 to Dec. 31, 1939, and from Jan. 1, 1940 to Dec. 31, 1940. He also presented unaudited financial statements made to the joint committee of the two funds for the period Nov. 9, 1939 to Dec. 31, 1939, and for the twelve months ending Dec. 31, 1940. Next were the regular published annual reports of the Twentieth Century Fund for the year 1935, years 1936, 1937 and 1938.

(Objections were made to testimony on individual items in the reports.)

Mr. Lewin:—I wonder if I could not interpose an objection at this time to this whole line of examination and approach the bench?

THE COURT:—There has been nothing of significance in this examination so far.

Mr. Lewin:—It is creating a lot of mystery that I would just as soon not have in the case; it means a lot of trouble to dispel it.

Mr. Kelleher:—These things do speak for themselves.

THE COURT:—They are not in evidence; the contents have not been disclosed. I don't like to anticipate matters too much.

By Mr. Leahy:

Q.—Now, showing you exhibit 35 for identification, which you just explained to us, I am turning to page B. I will ask you if there is anything on that page against which you can mark your initials for the same purpose as you marked them on the other sheet.

(The witness initialed the exhibit.)

Mr. Lewin:—I would like to see what he marked.

Mr. Kelleher:—Why was that necessary to be marked? I don't quite understand this procedure.

Mr. Leahy:—You will.

Mr. Kelleher:—Our objection is that it is an indirect way of getting something in.

THE COURT:—I don't know what is in there. I don't see what the great concern is about.

Mr. Kelleher:—I would just like to show your Honor this.

THE COURT:—There appears no reason for a departure from the usual methods. I will wait until it is offered.

By Mr. Leahy:

Q.—And I think you have already stated that Health Economics, Inc., was set up by Twentieth Century Fund? *A.*—Yes.

Q.—And, Mr. Brown, of your own personal knowledge, do you know, whether it was the Health Economics, Inc., which was the instrumentality in having H. O. L. C. set up G. H. A.?

Mr. Lewin:—We object to that; at last the cat is out of the bag.

Mr. Kelleher:—It is immaterial.

Mr. Leahy:—It is just an introductory question.

THE COURT:—If objected to, you will have to show me the materiality.

Mr. Leahy:—Shall I approach the bench?

THE COURT:—Yes.

(Counsel for both sides approached the bench and conferred with the Court.)

(There was much discussion at the bench on the materiality of the evidence offered. The Court took the matter under advisement.)

TESTIMONY OF DR. ROSCO GENUNG LELAND

DIRECT EXAMINATION (RESUMED)

By Mr. Leahy:

Mr. Leahy:—Exhibit 258, ladies and gentlemen, is a letter on the stationery of Dr. T. J. Williams. It is dated July 21, 1938, the American Medical Association, Chicago, Illinois:

U. S. EXHIBIT 258

"Gentlemen:

"Will you be kind enough to send me what information you have relative to the doctors, Donald Ross and Clifford Loos, private group clinic in Los Angeles, as well as the Trinity Hospital group in Little Rock, Arkansas, and other similar groups who provide medical service, hospitalization, drugs, services of specialists, etc., to the man and his family for a specified monthly payment.

"Kindly send same to the above Evanston address. Thanking you,

"T. J. Williams."

By Mr. Leahy:

July 25, 1938, directed to Dr. T. J. Williams, at the Davis Street address in Evanston, Illinois:

U. S. EXHIBIT NO. 257

"Dear Dr. Williams:

"The Medical Service Plan of Trinity Hospital, Little Rock, Arkansas, is one type of several prepayment plans for medical care that have been attempted."

(Here was read Dr. Leland's letter describing the Trinity Hospital plan.)

By Mr. Leahy:

Q.—To what do you refer, Doctor, where it says, "The staff members have also been willing to participate in such a plan because additional income for special services could be secured from subscribers to the plan"?

A.—It means that the plan did not give complete medical service, but that certain items of medical care were charged for at regular rates and were not included on the regular monthly premiums stated.

Q.—And those, added to the premiums stated, would make up the additional income which you speak about?

A.—They increased the income to the organization.

By Mr. Leahy:

Q.—Then you state: Sent under separate cover: Economics and Ethics of Medicine; Medical Service Plans; Organization of Medical Services; and Contract Practice. What were those four publications which you sent? *A.*—They were publications of the Bureau of Medical Economics, some of them the reports of special studies.

Q.—Doctor, did your bureau at any time since you became its director oppose the prepayment plan of medicine and medical care? *A.*—I should have to qualify that, if I may: we have opposed the compulsory prepayment plans but not voluntary.

Q.—And by "compulsory" to what do you refer? *A.*—By "compulsory" I refer to those plans which are made compulsory by law, applying to everyone in certain income groups, who must participate if they are employed persons.

Q.—To the voluntary prepayment plan, what has been the policy of your bureau? *A.*—An attempt to collect all the information that bore upon the organization and administration of such plans, in order that with the accumulation of experience we might be in a position better to assist those individuals or organizations that wished to organize plans for the benefit of low-income people.

Q.—Has your experience or the experience of the bureau, after the collection of these data that you refer to, been enabled at any time to assist those groups who desired to form prepayment plans? *A.*—Well, I can't give you the exact number, but there have been numerous individuals and groups, both in industry and in the community as well as state and county medical societies, that we have assisted and that I have assisted personally in the development of prepayment plans, and some of those are now in operation.

Q.—Can you think of any of them now as you sit there, Doctor? *A.*—Well, the California Medical Service, Physicians—California Physicians Service was sponsored by the California Medical Association. The Michigan State Medical Society—

Mr. Lewin:—Can you fix the time as to these, please?

By Mr. Leahy:

Q.—Could you give us the time, also, if you can, when these plans were formulated? *A.*—As I recall it, the California Medical Association plan was adopted by the House of Delegates of the California Medical Association in Los Angeles in about December, 1938. The Michigan State Medical Society plan was organized about two years ago and is now in full

operation. The New Jersey State Medical Society has a plan perfected, but I believe it is not yet in operation. Several plans have been approved and in three sections of the state have been organized in New York, one covering about 17 counties around New York City, another covering several counties around Utica, and a third several counties around Buffalo.

Q.—Doctor, has your bureau at any time taken any position of opposition with reference to the contract practice of medicine generally? *A.*—Well, yes. We have opposed the conditions under which contracts were—under which the medical care under contracts was delivered, the conditions being in opposition to certain of the sections of the Principles of Medical Ethics as adopted and followed by the American Medical Association.

Q.—And when were those principles adopted? *A.*—Well, those were in the process of development over quite a number of years. They have been added to and explained, made more intelligible from time to time as the conditions became more noticeable and more troublesome to the medical profession, and I believe that the last edition was about 1936 or '7.

Q.—Somewhere in your testimony or in the correspondence, Doctor, you have mentioned two of ten principles. What were the ten principles to which you referred? *A.*—The ten principles that we refer to frequently as the Ten Principles were adopted in 1934 by the House of Delegates at the meeting of the American Medical Association in Cleveland, merely as a guide which could be followed by county or state medical societies that undertook to organize prepayment medical plans, in case they felt it seemed necessary to supplement the private practice of medicine with a prepayment plan for those in low-income classes.

Q.—Were those ten principles at any time modified or amended in any subsequent convention of the House of Delegates? *A.*—Principle No. 6 was modified in 1935. As it was originally stated, it led to a considerable confusion and some contradiction to the remaining nine principles. In 1935 that principle was changed in wording.

Q.—In what respect was it changed? *A.*—That principle was changed (referring to a record) in 1935 to read: "In whatever way the cost of medical service may be distributed, it should be paid for by the patient in accordance with his income status and in a manner that is mutually satisfactory."

Q.—Now, what effect did this amendment or clarification of this sixth principle have on prepayment plans, if any? *A.*—Well, it merely clarified the position of the American Medical Association, because this principle, as now stated, pertains directly to the prepayment idea. Before, the principle stated that payment should be made by the patient at the time the service was rendered, which meant nothing more than the private practice of medicine.

Q.—In other words, Doctor, did the amendment of this principle No. 6 operate in opposition to or in advance of prepayment cost plan? *A.*—Well, it advanced the—or assisted in a better interpretation of the yardsticks or measures that should be applied in the organization of prepayment arrangements.

Q.—Doctor, to your knowledge, the American Medical Association—has it members of the association who are conducting contract practice of medicine? *A.*—Yes.

Q.—Are they in large numbers or few? *A.*—I have no idea how many, what proportion of physicians in good standing throughout the United States are actually engaged in contract practice, but I suspect there is a fairly large number, and some of them are engaged in a type of contract practice that is quite essential in order to give medical attention to certain groups of people who are working in various industries or the production of natural resources.

Q.—When you say there are quite a number, do you mean 10 or 20 or a hundred, or do you mean in the thousands? *A.*—Well, I would say probably several thousand.

Q.—Have you any information at all as to how many groups are being treated under plans of contract practice? *A.*—There are in the United States about 350 medical groups, what we call in medical parlance "group practice groups." A recent study of three hundred and thirty-five of those groups indicated that only seventeen of them were employing any form of prepayment medical plan.

Q.—The balance were employing what kind of a plan? *A.*—Well, fee for service plans.

Q.—How recent was that study, Doctor? *A.*—Completed last year.

Q.—And what area did the study cover? *A.*—The United States.

Q.—Now, Doctor, did you personally or did your bureau ever take any position whatsoever with reference to G. H. A. here in Washington? *A.*—No, sir.

Q.—Was any study made of it? *A.*—No independent study. I realized that Dr. Woodward was making a very careful and continuous attempt to get information, and I knew that any information that he was able to secure would be made readily available to me if at any time I needed it.

Q.—Has your bureau ever made any kind of a report on G. H. A.? *A.*—No, sir. We have referred to a report or the article that was published in THE JOURNAL of October 2, I believe.

Q.—But aside from such a reference as that, have you ever made any independent investigation of or report of G. H. A.? *A.*—No, sir.

Q.—Do you recall whether your bureau in any way cooperated with Dr. Woodward in the preparation of this article? *A.*—Not at all.

Q.—Aside from the trip which you say you made here to Washington sometime in July of 1937, did you cooperate or collaborate in any way, shape, or form with Dr. Woodward? *A.*—No, sir.

Q.—What assistance, if any, did you give Dr. Woodward in the preparation of the article? *A.*—Well, I just didn't assist him. He prepared the article himself, and it was his article.

Q.—What conferences, if any, did you have with him with reference to its preparation? *A.*—Not the preparation of the article? I undoubtedly was in his office several times and, among other things, might have asked a question or two about G. H. A., but I have no independent recollection of those events. However, in the preparation of the article I had nothing to do. I didn't even know he was writing an article.

Q.—Now, with reference to this correspondence which I brought to your attention there, Doctor, some of the letters being those which you received and others which you had written in reply thereto, was it your intention in any way to discourage a prepayment plan of medicine, at all events, when you wrote those letters? *A.*—No, sir. I had no idea of discouraging any one from organizing a prepayment plan, but I felt that they were entitled, by courtesy and otherwise, to any information or facts that I might have that might help them in organizing a plan of that kind.

Q.—Now, Doctor, with reference to the particular charge preferred against you as a defendant here, I want to ask, in the words of the charge against you: Did you, Doctor, at any time conspire with any one for the purpose of restraining trade in the District of Columbia? *A.*—I did not.

Q.—That is to say, for the purpose of restraining Group Health Association, Inc., in its business of arranging for the provision of medical care and hospitalization to its members and their dependents on a risk-sharing prepayment basis? *A.*—Never.

Q.—Or for the purpose of restraining the members of Group Health Association, Inc., in obtaining by cooperative efforts adequate medical care for themselves and their dependents from doctors engaged in group medical practice on a risk-sharing prepayment basis? *A.*—No, sir.

Q.—For the purpose of restraining the doctors serving on the medical staff of said Group Health Association, Inc., in the pursuit of their callings? *A.*—No, sir.

Q.—For the purpose of restraining doctors (not on the medical staff of Group Health Association, Inc.) practicing in the District of Columbia, including the doctors so practicing who are made defendants herein, in pursuit of their callings? *A.*—I did not.

Q.—For the purpose of restraining the Washington hospitals in the business of operating such hospitals? *A.*—No, sir.

Q.—Did you ever discuss with anybody at any time anything in connection with any Washington hospitals and G. H. A.? *A.*—No, sir. May I modify that?

Q.—Surely. *A.*—I did overhear some discussion at the time of the November 6 conference, but I did not engage in that conversation.

Q.—Prior to that and exclusive of that, what other information have you with reference to any—pertaining to the Washington hospitals? *A.*—None.

Q.—Did you ever approach anyone to advise him not to join G. H. A. as a member. *A.*—Never.

Q.—Did you ever talk to anybody who was on the staff of G. H. A. as a medical doctor? *A.*—No, sir.

Q.—Did you ever try to do anything personally with anybody whatsoever in reference to the medical staff or the membership of G. H. A.? *A.*—No such idea ever entered my mind.

Q.—When did you first find out where the clinic, even, was located? *A.*—About three days ago I walked past it.

Q.—Was that the first time you ever saw it? *A.*—Yes, sir.

Q.—Did you ever at any time, either personally or with anybody else, discuss the G. H. A. clinic? *A.*—Not to my recollection.

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Q.—A great many letters have been introduced here, Dr. Leland. You have sat in the courtroom and know these letters which have been introduced? *A.*—Yes, sir.

Q.—Exclusive of those which were brought to your attention today, let me ask you: What information have you with reference to letters which were written by any official or officer of the District Medical Society? *A.*—None at all.

Q.—When is the first time those letters ever came to your attention? *A.*—Except the ones that came to me personally, at the time of the trial here.

Q.—Minutes of meetings, as you recall, have been introduced here in evidence, purporting to be the record of what transpired at certain meetings of the District Medical Society. What information had you with reference to the contents of any of those meetings? *A.*—No information at all until I heard them read here.

Q.—There was one meeting which I think was some time in November 1937, and do you recall that Dr. Woodward was recorded in that meeting as having been present? *A.*—Yes, sir.

Q.—Do you recall whether you were present at that meeting or not with Dr. Woodward? *A.*—I doubt that I could be absolutely positive beyond any doubt, but—

Q.—What is your best recollection? *A.*—My best recollection is that I was not there.

Q.—Aside from the meeting of the executive committee in July of 1937, which you have mentioned to us, and the other occasion when you state that you made a committee report with reference to a plan which the District Medical Society was forming, did you appear at any executive committee meeting, special committee meeting, or meeting of the Medical Society? *A.*—It is barely possible that I meant there all of those meetings, but at present, to the best of my recollection, I did not.

Q.—I omitted to ask you this, Dr. Leland: Are you a member of any associations of a professional character? *A.*—I am a fellow of the American Public Health Association, a member of the American Statistical Association, the American Economic Association, the Royal Economic Society, London, and Medical Societies.

Q.—Is your bureau now or you personally engaged in any way with reference to the medical assistance which is being rendered in the present national preparedness? *A.*—I am conducting the census of physicians for the Committee on Medical Preparedness of the American Medical Association.

CROSS EXAMINATION

By Mr. Lewin:

Q.—Dr. Leland, see if I understood your testimony. It is a fact, isn't it, that a copy of the Cutter letter of March 1937, was made for you?

Mr. Kelleher:—Ireland letter.

By Mr. Lewin:

Q.—That's the Ireland letter to Cutter. *A.*—That's right.

Q.—And it is a fact that it was sent to you? *A.*—I assume so, yes, sir.

Q.—And all you testified here today was that you don't recall whether you read it at that time or not? *A.*—That's right.

Q.—And if you had read it, it would have told you that the H. O. L. C. was planning a medical service plan, wouldn't it? *A.*—Yes.

Mr. Leahy:—I object as argumentative; speaks for itself if he read it.

THE COURT:—Yes.

Mr. Leahy:—It would have told him what appears on the face of it.

Mr. Lewin:—Correct.

THE COURT:—Objection sustained.

By Mr. Lewin:

Q.—It would have told you also, would it not, that they were trying to get a staff?

Mr. Leahy:—I object, if your Honor please.

THE COURT:—Yes.

Mr. Leahy:—The letter speaks for itself.

THE COURT:—Yes.

Mr. Lewin:—I am just pointing out, your Honor will remember that there is a lot of documents here.

THE COURT:—I know.

Mr. Lewin:—And it is very hard to deal with them. I don't want to read the entire document, but I should like to be able to point up some questions with regard to it.

THE COURT:—I suppose it is permissible, in view of the latitude I have given both sides.

Mr. Leahy:—It is just argumentative, I thought, too, if your Honor please.

THE COURT:—It is argumentative, true, but about 90 per cent of these questions are argumentative.

Mr. Leahy:—I guess that is true.

THE COURT:—You get seven hundred and fifty documents in here, why, I assume it is necessary. At least counsel do, and I haven't objected to it.

Mr. Lewin:—I am going to make this just as sharp as I possibly can.

Mr. Leahy:—Go ahead.

Mr. Lewin:—I promise you that.

By Mr. Lewin:

Q.—What is your answer, sir? *A.*—Might I see the document, please?

Q.—Yes, indeed.

(The document referred to was handed to the witness.)

The Witness:—Well, it states they were looking for physicians, yes.

By Mr. Lewin:

Q.—The kind of information in that letter is the kind of information that falls under your jurisdiction as head of the Bureau of Medical Economics; isn't it true? *A.*—Information similar to that, yes, sir.

Q.—Yes. In normal course that's the kind of information, if sent to the A. M. A., which would come to you? *A.*—That is right.

Q.—Isn't that right? *A.*—That is right.

Q.—Yes. Now, I think you told us that the first time you heard about Group Health was down at Atlantic City. *A.*—That is right.

Q.—And that was from June 6 to June 10, wasn't it? *A.*—I think those were the dates.

Q.—And didn't you say that you heard of it from Dr. Woodward? *A.*—The statement he made in the House of Delegates, yes.

Q.—And didn't you say that when you came down to Washington with Dr. Woodward on July 14, that the only information you had with regard to Group Health Association was what he had told you? *A.*—Well, I had learned in Atlantic City.

Q.—From Dr. Woodward? *A.*—Yes.

Q.—Is that right? *A.*—To the best of my recollection.

Q.—And isn't it also a fact that before you went down to Atlantic City Dr. Conklin had sent you the confidential prospectus of the health plan for Washington? *A.*—Well, I received a prospectus, but I didn't connect the two in any way.

Q.—Well, did you know— *A.*—They were named—they had different names.

Q.—Well, didn't it outline a group practice plan on a prepayment basis? *A.*—I had no way of connecting the two, the prospectus that he sent with the H. O. L. C. or Group Health Association.

Q.—Did you know of any other plan in Washington? *A.*—No.

Q.—At that time? *A.*—No.

Q.—Didn't his letter tell you that it was in relation to a prepayment medical service in government bureaus? *A.*—Well, there might be more than one.

Q.—Was there more than one? *A.*—I didn't know

Q.—Do you mean to say you made no connection between that plan that you received from Dr. Conklin.— *A.*—That's right.

Q.—And the plan that was under discussion at Atlantic City? *A.*—That's right.

Q.—Didn't Dr. Conklin write you, "I am enclosing herewith a plan that has recently come to our attention for development of a prepayment medical service in governmental bureaus"? *A.*—(The witness nodded his head.)

Q.—"The potentialities of such a plan, if and when it is put in force in the Capital City, should be readily understood"? *A.*—Yes, sir.

Q.—And didn't you read that plan? *A.*—I did.

Q.—And when you came down here on the 14th didn't you connect that plan which you had read with the plan that you were asked to come down here and advise the District Medical Society on? *A.*—No, I did not.

Q.—No connection between the two? *A.*—No, sir.

Q.—You thought it related to some other plan than Group Health Association? *A.*—Yes, sir.

Q.—What other plan did you think it related to? *A.*—Well, it had different names, some other—some other federal employees, but I have no way of knowing who.

Q.—Wasn't it referred to as "a cooperative medical service plan? *A.*—Yes.

Q.—Did you ever find out that there was any other cooperative medical service plan that fitted that description except Group Health? A.—Well, I didn't feel that that description fitted Group Health, with the information that I had at that time.

Q.—Did you make any later study to find out what was referred to in that prospectus? A.—No. That is the last I ever heard of that.

Q.—Didn't you ever at any time connect that prospectus with Group Health Association? A.—No.

Q.—Didn't you refer to that prospectus in a written report which you made to Dr. West in connection with Group Health Association? A.—I don't recall that I ever made a written report to Group Health.

Q.—All right. We will come to that in a moment. Now, you told us that you were authorized to come down to Washington with Dr. Woodward to confer with the District Medical Society? A.—Yes.

Q.—Weren't you formally authorized to come down here and advise the District Medical Society with regard to Group Health Association? A.—I think those were the words used.

Q.—Yes. And didn't you come down to obey that instruction? A.—We had no instructions.

Q.—Didn't you have an instruction to come down here and advise the District Medical Society with regard to Group Health Association? A.—That is a pretty broad statement.

Q.—Well, broad or not, weren't you instructed to do that? A.—Yes.

Q.—And didn't you come down here for that purpose? A.—Yes, sir.

Q.—And didn't you as a matter of fact advise the District Medical Society? A.—I did.

Q.—All right. You did talk, then, at that conference? A.—Yes.

Q.—July 14th? A.—Yes.

Q.—And didn't you know that Dr. West had suggested another cooperative plan to be set up by the District Medical Society to offset the effect of Group Health Assocaition? A.—I knew that after I returned home.

Q.—When you wrote to Conklin and explained your plan, you knew that what he wanted was the details of a plan to offset Group Health Association, didn't you? A.—I don't believe I did at that time.

Q.—Oh, you said you knew it after you got home. And you wrote Conklin in August, didn't you, and told him in detail what you had proposed when you were down here advising the District Medical Society? A.—Perhaps I did.

Q.—All right. Then you knew that what you were advising them was to set up a plan for the first time, a prepayment plan, in competition with Group Health Association; isn't that right? A.—No, sir.

Q.—Huh? A.—No, sir.

Q.—Didn't you know that Dr. West had suggested that the District Medical Society, for the first time in its history, organize a prepayment plan to offset Group Health Association? A.—That wasn't my understanding of it. I understand that it was an outgrowth of a plan that they had had in operation for some two years and wanted to go on further with.

Q.—Did you have a talk with Dr. West about that time? A.—Oh, I had lots of times. I presume so.

Q.—Well, you say you found out that that was his plan when you got back to Chicago. Did you find it out from Dr. West? A.—I don't know the day; I heard Dr. West mention the fact that he had been here and made some suggestions.

Q.—Yes.

Mr. Kelleher:—Here it is.

By Mr. Lewin:

Q.—And didn't Dr. West tell you that his suggestion was to set up a plan in competition with Group Health? A.—He may have. I don't recall it now.

Q.—Well, does this refresh your recollection, his letter to Verbrycke, which is in evidence (indicating)? A.—Uh-huh.

THE COURT:—Point out the part you have in mind.

Mr. Lewin:—I have. I have done so.

The Witness:—Yes.

By Mr. Lewin:

Q.—Didn't he say this in that letter: that "If I were a member of the committee of the District Society I would want to consider the advisability of organizing a sort of cooperative movement under the auspices of the Society to offset the effect of the cooperative movement that is now being promoted by certain agencies in Washington"? A.—That's what he said in the letter.

Q.—Yes. And then when you advised Conklin in August of 1937, you knew you were advising him of your pool for that purpose, didn't you? A.—That isn't the purpose I had in mind.

Q.—And wasn't the suggestion that you made for a cooperative movement simply a collection agency for private practice? A.—No, not that at all.

Q.—Wasn't that the effect— A.—No, sir.

Q.—Of what you wrote Dr. Conklin? A.—No, sir.

Q.—Didn't you suggest that there be a pool of money set up by prepayment and out of that pool of money doctors be paid on fee-for-service basis? A.—It was a cash indemnity prepayment plan.

Q.—Yes. And it planned, didn't it, that the patient would receive the cash? A.—That is right.

Q.—And pay the same fee for service—doctors on the same fee-for-service basis? A.—You may speak of it that way.

Q.—And didn't contemplate any group practice whatever? A.—No.

Q.—Isn't that right? A.—That's right.

Q.—Yes. Well, now, you said, I think, on your direct examination, that when you went back to Chicago you did nothing more except to make an oral report to Dr. West? A.—That's right.

Q.—You stand on that testimony? A.—There is a report that carries my name.

Q.—Well, didn't you authorize it? I show you the report. A.—Yes, sir.

Q.—Didn't you and Dr. Woodward make a written report to Dr. West? A.—I didn't collaborate with Dr. Woodward.

Q.—Do you mean to say that Dr. Woodward acted without your authority? A.—Well, he had a perfect right to.

Q.—Is that your testimony? He had a perfect right to. Then, he was authorized to make this report? A.—I authorized him to put my name to it.

Q.—Oh. You read it, I suppose, did you not? A.—I think I must have, yes, sir.

Q.—And weren't you responsible for this little statement at the end, in writing to Dr. West, that "this Group Health Association is obnoxious to public policy, for obvious reasons"? A.—No, sir. That's not my language.

Q.—Wasn't that your idea? A.—That's not my language.

Q.—Maybe not your language. Isn't that what you wanted to stand behind as your report? A.—I would stand behind it, yes.

Q.—You would stand behind it? A.—Yes, sir.

Q.—And that is what you reported to Dr. West? A.—Yes, sir.

Mr. Kelleher:—The reference to prospectus in there.

By Mr. Lewin:

Q.—And I will ask you to look at it again and see if that is not a reference to that prospectus that you said you never connected to Group Health Association. A.—Yes, sir. The first thing.

Q.—Yes. Very first thing? A.—That's right.

Q.—It says this, doesn't it? "A prospectus for a plan for a cooperative medical service on a periodic payment basis for federal employees and their families in Washington was circulated sometime ago. The prospectus is not dated, and the time of its issue is not known. It was circulated anonymously." And then you describe the plan, don't you? A.—(The witness nodded his head.)

Q.—And that's the plan that you think is Group Health, don't you?

Mr. Richardson:—Now, you mean?

Mr. Lewin:—Then.

Mr. Richardson:—Well, say then.

Mr. Kelleher:—Oh, he understood the question.

Mr. Lewin:—I'll say now and then, both.

The Witness:—Well, I can't be sure that this cooperative—plan for cooperative medical service is the same prospectus that I received in the letter from Conklin.

Q.—Well, do you know of any other prospectus that was headed that way? A.—No, I do not.

Q.—It has the same heading, doesn't it? A.—As far as I know.

Q.—And doesn't the description you give of it fit it on all fours? A.—It fits G. H. A.

Q.—Doesn't it fit prospectuses that you had received from Conklin as early as June 5? A.—I don't remember the prospectus.

Q.—And had read before you went to Atlantic City? A.—I don't remember the prospectus.

Q.—Well, did you find it? A.—If I could see the prospectus I could tell.

Mr. Lewin:—All right. You may see it. Let's give him the prospectus.

V 19

By Mr. Lewin:

Q.—Here is a photostatic copy of the prospectus. Is that the one you received from Conklin?

Mr. Kelleher:—Where are the original exhibits?

Mr. Lewin:—I've got this. I don't know about the original.

Mr. Leahy:—Where were those original exhibits?

Mr. Lewin:—The number of this exhibit, Doctor; could I disturb you long enough to get the number off of it? 104.

Mr. Leahy:—Where is the original letter of Dr. Woodward?

Mr. Kelleher:—We can't find it.

Mr. Leahy:—It must be around here, because it has got the mark there on it telling what the prospectus is.

Mr. Kelleher:—That is why we would like to have it.

Mr. Leahy:—I can tell you what it is. It has the indication of the stenographer right on it.

Mr. Lewin:—That is going to be my next question.

Mr. Leahy:—It is not Group Health.

Mr. Kelleher:—Do you want to take the stand?

Mr. Leahy:—Sure. Do you want me to?

Mr. Kelleher:—Surely.

Mr. Leahy:—I love to talk to you.

Mr. Lewin:—Do you have that exhibit number? Do you know what it is?

THE COURT:—What are we waiting for now?

Mr. Lewin:—Waiting for the witness to answer.

The Witness:—It is still my opinion that this does not necessarily refer to Group Health Association.

By Mr. Lewin:

Q.—This is the prospectus, is it not, that you referred to in your joint report with Dr. Woodward to Dr. West, dated July 16? *A.*—Yes, sir.

Q.—It is. And you were reporting on Group Health at that time and intended so to report? *A.*—We were reporting on more than Group Health.

Q.—Were you reporting on a different plan than Group Health? *A.*—Reporting on information that we'd had up to date.

Q.—Well, had you had any information at that time that there was another plan other than Group Health of that same character here? *A.*—Apparently from this.

Q.—Well, now, you came down here on the 14th. Did you hear any discussion of another plan here? *A.*—We heard discussion of a plan for federal employees.

Q.—And that's what you thought was Group Health, isn't it? *A.*—Not necessarily. There could have been two.

Q.—Well, now, what is your testimony? Were there two that were discussed or was there one Group Health? *A.*—There was one about which there was a considerable amount of doubt as to whether it would merge into Group Health or whether it was another outgrowth.

Q.—You mean to say that was at this discussion with the District of Columbia doctors? *A.*—At a committee meeting, so far as I can recall.

Q.—There was a discussion of two plans in the District of Columbia for prepayment basis—of group practice on a prepayment basis? *A.*—I think I recall a discussion of a plan about which there was considerable doubt.

Q.—Well, that was Group Health Association, was it not? *A.*—That was another plan for group—for federal employees, of a very vague nature.

Q.—Well, whose plan was that? *A.*—This one here about which we have the prospectus.

Q.—Well, did you point out in your report to West that there were two plans that you considered on your trip to Washington and that conference that you had with the District Medical Society (handing an exhibit to the witness)? *A.*—We reported to Dr. West that there was a prospectus, and we also had certificates of incorporation of Group Health.

Q.—Well, what was the difference between the two. *A.*—A vast difference.

Q.—What was the difference? *A.*—One was a prospectus, and the other were certificates of incorporation.

MARCH 19—MORNING

(Before the Jury entered, the Court heard extended discussion on admission of evidence relative to the extent of the subsidy given by Health Economics, Inc., to Group Health Association, Inc.)

TESTIMONY OF DR. ROSCO GENUNG LELAND

CROSS EXAMINATION

By Mr. Lewin:

Q.—I don't know whether it has brought out or not that you are on a salary with the the A. M. A. *A.*—That is true.

Q.—And that you were a full-time employee of the A. M. A.? *A.*—Yes.

Q.—Would you say that you are a member of the headquarters staff of the A. M. A.? *A.*—Yes, that is correct.

Q.—Well, now, in addition to advising the District Medical Society with regard to Group Health Association on July 14, when you came down here with Dr. Woodward, you supplied it with facts, did you not?

Mr. Leahy:—I object to the question. There is no evidence that he advised the District Medical Society when he came here in July.

Mr. Lewin:—He so testified.

THE COURT:—Did you so testify?

The Witness:—Yes.

By Mr. Lewin:

Q.—In addition to that you also supplied them with facts at that meeting, did you not, relative to Group Health Association? *A.*—Not Group Health Association.

Q.—Well, with regard to the controversy that they had; that they were deliberating on, which related to Group Health Association. *A.*—I was here to get as much information as possible. I had so little I couldn't add very much to what they had.

Q.—Hadn't you discussed these matters with Dr. Woodward on the train coming here and with him in Chicago? *A.*—No, not to my recollection.

Q.—Do you mean to say he didn't tell you about the facts he had collected? *A.*—Previously?

Q.—You did have the charter of Group Health Association, did you not? *A.*—I hadn't seen it at that time, no.

Q.—You didn't see it until you got here to Washington? *A.*—Later.

Q.—Had he not it with him? *A.*—I don't know.

Q.—Had he obtained it and other papers relating to Group Health Association before that? *A.*—I don't know.

Q.—You will not say that he did not discuss with you the information he had either in Chicago or on the train on the way down here? *A.*—That is not what I said.

THE COURT:—He didn't say that.

By Mr. Lewin:

Q.—Then, Dr. Woodward discussed with you the facts he had collected? *A.*—At some time.

Q.—Didn't you and Dr. Woodward both contribute facts to this meeting that you attended on July 14? *A.*—That is about what?

Q.—About the subject matter on which you were advising them? *A.*—Not on Group Health Association.

Q.—What other subjects were discussed at that meeting? *A.*—I offered a suggestion entirely separate from Group Health for the information of those who were considering the development of a prepayment plan for the District Medical Society.

Q.—And you say that was totally disassociated from the Group Health Association question?

THE COURT:—You went all over that.

Mr. Lewin:—Yes, but he has now given me an entirely different idea.

THE COURT:—That has all been covered.

Mr. Lewin:—I thought it had been established but I now find the witness willing to give me some other slant.

THE COURT:—It is not necessary to repeat these things.

By Mr. Lewin:

Q.—Let me read you from Exhibit 186, which is in evidence, a letter from Representative Hayes in Washington, the representative of the American Medical Association in Washington, dated July 31, 1937. Do you know Mr. Hayes, by the way? *A.*—I do.

Q.—Now, he reported on a meeting of the District Medical Society of July 29 and he said that Dr. Sprigg had read a report reviewing the facts that had been obtained regarding Group Health Association. Nearly all his facts were substantially the facts which you and Dr. Leland had supplied to the group which attended the meeting here about two weeks before. Now, what have you to say with regard to that? Is he right? *A.*—I presume so, but I have no idea as to what he refers.

Q.—All right, after you were back in Chicago, did you tell Dr. Woodward that you would be willing to elaborate for the District Medical Society or its committee anything you had told them that was not clear? *A.*—I don't recall telling him anything in those words, but I might have.

Q.—And did you tell Dr. Woodward around Aug. 18, 1937, that you didn't at that time have any further plan for forestalling Group Heath Association? *A.*—I don't recall any such conversation.

Q.—Would you say you hadn't told him that? *A.*—No.

Q.—You may have told him that? *A.*—My answer is the same as before.

Q.—Just what? *A.*—That I don't recall any conversation of that kind.

Q.—But you may have done so? *A.*—I don't recall it.

Q.—Let me read you Exhibit 202, which is in evidence, a letter from Dr. Woodward to Dr. Conklin, dated August 18:

"I understand from your letter that everything that was said and done by Dr. Leland and me in the course of our recent conference with the Committee then having Group Health Association under consideration is now before the committee newly appointed to study the matter.

"If there is anything in what either of us said or did that was obscure or calls for explanation or elaboration, I shall be glad to undertake to explain or elaborate it for the information and guidance of the committee.

"Neither of us has at the present time any further proposal looking toward forestalling the growth of the Group Health Association, or towards preventing the organization of similar groups in the District of Columbia."

Did you give Dr. Woodward the information on which he could have based that letter? *A.*—Let me see it.

(Thereupon Court and counsel engaged in an informal conference at the bench, which was not reported.)

By Mr. Lewin:

Q.—Dr. Leland, isn't it a fact that you kept in contact with the District Medical Society or its representative with regard to Group Health during the late summer or early fall of 1937? *A.*—No, sir.

Q.—Didn't you come down here some time in October and go to Dr. Conklin's office and have a conversation with him in regard to Group Health Association? *A.*—I was in Washington some 12 or 14 times during 1937 and 1938, and all but one time of which I have any recollection now, were on other matters; other association matters.

Q.—Would you deny that you went to see Dr. Conklin in his office in October with regard to Group Health Association? *A.*—I have no recollection of seeing him about Group Health, but I presume I did go to his office because that was my custom to go to the office of the secretary of the Medical Society while I was in the city.

Q.—I would ask you whether you went to see him on this subject? *A.*—I have no recollection.

Q.—That doesn't answer my question.

THE COURT:—If he has no recollection then he cannot either admit or deny it. You asked him to either admit or deny it and he told you he has no recollection on the subject; therefore he cannot do it.

By Mr. Lewin:

Q.—Well, if Dr. Conklin said at a meeting of the local society, or its executive committee—I think it is a meeting of the local society—that Dr. Leland "had been in my office about ten days ago discussing the local situation," or words to that effect, you would think he was correct, wouldn't you?

Mr. Leahy:—Argumentative.

THE COURT:—Sustained.

By Mr. Lewin:

Q.—Do you know a Dr. Earl Templeton? *A.*—I do not.

Q.—Did you ever hear of him? *A.*—This is the first time I heard of him.

Q.—Didn't you know him as a member of the Executive Committee of the District Medical Society? *A.*—If, so, I have forgotten it.

Q.—Did you make any suggestion to Dr. Templeton in September 1937, with regard to what kind of a public relation counsel the society ought to employ because of the Group Health situation? *A.*—I did not.

Q.—Did you make that suggestion to any other representative of the District Medical Society about that time? *A.*—I don't recall ever discussing the matter of a counsel of that sort with any one of the District Medical Society.

Q.—Let me see if these excerpts from the minutes refresh your recollection at all. Dr. Conklin, speaking at the meeting of Nov. 3, 1937:

"The secretary said he knew personally that the American Medical Association authorities have been making some effort to contact the Society and have been keeping in touch with the local situation,"

and I might say he was discussing Group Health at that time.

"He said that Dr. Olin West, the secretary, had called him on the telephone on several occasions; further that Dr. Leland, Director of the Bureau of Legal Medicine was in his office ten days ago discussing the local situation. The A. M. A. had a local representative."

Do you know whether the A. M. A. had any other representative at that time than Mr. Hayes? *A.*—No, I do not.

Mr. Lewin:

"He cited this merely to show that the society is interested in the local situation. He personally made contact with Dr. Holman Taylor."

By the way, do you know Dr. Taylor? *A.*—Yes.

Q.—Did you know who he was? *A.*—Yes.

Q.—Secretary of the State Association of Texas? *A.*—Yes.

Q.—What have you to say with regard to that excerpt, does it refresh your recollection? *A.*—Only in so far as Dr. Conklin said I was in his office. Discussing the "local situation" might have been many things, and doesn't necessarily mean Group Health Association.

Q.—That is your explanation? *A.*—Yes.

THE COURT:—He says that is his explanation.

By Mr. Lewin:

Q.—All right, your Honor. Let me read this excerpt from the minutes of October 6:

"Dr. E. R. Templeton said that Dr. Leland suggested,"

and this was in connection with the matter of employing a public relations counsel:

"Dr. Leland suggested that the wisest thing would be to employ a former newspaper man."

Q.—Does that refresh your recollection as to your ever having made that statement? *A.*—What was that?

Q.—That you suggested a former newspaper man as the one to be the Society's public relations counsel? *A.*—As I recall it now, the question which I discussed with some one, whom I don't recall at present, was in connection with the employment of an executive secretary, and I did make some suggestions on that.

Q.—Did you make this suggestion that Dr. Templeton said you did? *A.*—I don't recall that exact statement, but I did have some discussion concerning the method of going about the employment of an executive secretary for the Society.

Q.—Now, Dr. Leland, you knew in the fall of 1937, didn't you, that the Medical Society of the District of Columbia believed it to be the duty of the American Medical Association to oppose Group Health Association with all its might? *A.*—I don't know that I would go quite that far.

Q.—Didn't you hear that? *A.*—I heard them make some statement that they would like some assistance.

Q.—And that is all you heard? *A.*—I wouldn't be sure, but that is all I recall at the moment.

Q.—Didn't you hear them say that it was the duty of the American Medical Association to "combat" Group Health Association vigorously? *A.*—It is possible, but I do not recall it.

Q.—You knew it then that that was what they wanted the American Medical Association to do?

Mr. Leahy:—I think the persons and time ought to be fixed.

Mr. Lewin:—Didn't you know that on Nov. 6, 1937?

Mr. Leahy:—Know just what? I want to know who said it.

Mr. Lewin:—The District Medical Society said it.

Mr. Leahy:—The District Medical Society can't talk.

Mr. Lewin:—Well, it did through its officers and committees; it passed this resolution, didn't it?

The Witness:—What resolution?

By Mr. Lewin:

Q.—The resolution of the District Medical Society that they believed it to be the duty of the American Medical Association to oppose Group Health vigorously.

Mr. Leahy:—I object to the question until the resolution is identified.

Mr. Lewin:—I think I am within my rights on cross-examination.

THE COURT:—I think you might identify it, if it helps the witness.

By Mr. Lewin:

Q.—Didn't you hear this resolution read by Dr. Hooe at that meeting on November 6, which you attended with Doctors Hooe, McGovern, and Woodward:

"The Medical Society of the District of Columbia at its regular meeting held Nov. 3, 1937, adopted the following resolution:

"'1. That inasmuch as the movement threatens to be nationwide in its scope, and affect every component organization of the American Medical Association, it is the duty of the American Medical Association to oppose immediately with all its might this entering and possibly illegal wedge to the socialization of medicine.

"'2. That in view of the tremendous import of the Group Health Association movement to the membership of the Medical Society of the District of Columbia and also to the profession at large and to the public, it is the opinion of the Medical Society of the District of Columbia that it is the duty of the American Medical Association to combat vigorously Group Health Association, Incorporated,"

Didn't you hear that resolution read at that meeting? *A.*—November 6?

Q.—Yes. *A.*—I think I did, yes.

Q.—And you were one of these "proper officials" of the American Medical Association that was being asked to do this? *A.*—I was at the meeting.

Q.—Will you answer my question: Weren't you one of the proper officials as referred to in that resolution? *A.*—I think so.

Q.—And you knew also, didn't you, that there wasn't any question of the jurisdiction of the American Medical Association to interfere with the local society in this case, was there? *A.*—I don't quite understand the question.

Q.—Didn't you say on your direct examination that the A. M. A. held aloof and had no jurisdiction over these local bodies, wasn't that your testimony? *A.*—I don't think so; it might have been.

Q.—As a matter of fact, you knew at that time that the District Medical Society had expressly waived any such question and had conferred jurisdiction over this matter on the American Medical Association? *A.*—I didn't know that.

Q.—Didn't you know that it had passed a resolution that they waived any question of regional interference on the part of the A. M. A.? *A.*—I didn't know that.

Q.—What is meant by "waiving regional interference"? *A.*—I can't give you a legal definition.

Q.—I am not asking for that: What did it mean to you? *A.*—I don't recall ever hearing it read.

Q.—All right, let me continue reading it.

"Thirdly, That the Medical Society of the District of Columbia waives any question of regional interference by the American Medical Association.

"'4. That the American Medical Association give a definite and immediate expression of its intended action in this matter.'"

Did you hear that resolution read? *A.*—I did.

Q.—That was the resolution that you gentlemen were assembled there to discuss? *A.*—In part.

Q.—And didn't you hear Dr. West speaking for you gentlemen, and the American Medical Association, say that in answer to that last request that the A. M. A. had been fighting this thing; he thought it had been fighting it even before the District Medical Association got interested, and it would continue to do so until it was called off? *A.*—I heard that.

Q.—Did you object to that? *A.*—I said nothing.

Q.—Did you intend silence to be consent? *A.*—There wasn't anything for me to say.

Q.—You think it was decided for you. What were you there for? Wasn't it to discuss this very question? *A.*—Not necessarily.

Q.—Did you tell Dr. Hooe and Dr. McGovern that you were not in sympathy with what had been expressed by Dr. Hooe and Dr. West as being the policy of the A. M. A.? *A.*—No.

Q.—Did you know at this time that the committee of the District of Columbia Medical Society had met and decided to bring proceedings against Drs. Lee and Scandiffio because they were members of the staff of Group Health?

Mr. Leahy:—I object to the form of the question.

Mr. Lewin:—On the ground that it is leading? this is cross-examination.

Mr. Leahy:—No, because you are not bringing in the ground on which the District Medical Society did bring these disciplinary proceedings.

Mr. Lewin:—If there is one thing that is clear in this case, that is.

THE COURT:—The question then is whether he knew they were bringing disciplinary proceedings because of their connection with Group Health?

Mr. Leahy:—It is not that at all; it is because of their violation of the articles of the constitution under which the local society regulated the conduct of its members. I object to the statement that it was because of something which is not in evidence and which is contrary to the fact and the evidence.

By Mr. Lewin:

Q.—What is your answer? *A.*—The first time I heard anything about or the names of these two physicians was at this meeting.

Q.—Did you hear that the committee of the District Medical Society had brought disciplinary proceedings against those two doctors because of their connection with G. H. A.? *A.*—Whatever was reported at that meeting I heard.

Q.—Can you answer my question? *A.*—I don't recall the wording.

Q.—You mean to say that idea is new to you, now? *A.*—He didn't say that.

Mr. Lewin:—I am asking him.

THE COURT:—Well, he didn't state that, and your question was framed in a way to indicate that he had; he didn't say what was to be inferred from your question.

By Mr. Lewin:

Q.—I would like to know whether you didn't hear and realize at that time that the committee of the District Medical Society brought disciplinary proceedings against Drs. Lee and Scandiffio because of their connection with G. H. A. *A.*—I don't recall the exact language but whatever was reported by those gentlemen at that meeting I heard.

Q.—Didn't you know in substance that very thing? *A.*—I didn't know it.

Q.—Didn't you know it at the very start of that meeting? *A.*—No, sir.

Q.—Now, I am going to read you the third paragraph of that conference and see if that doesn't refresh your recollection. The first two paragraphs deal with the resolution that I have read you. Here comes the very first business of that meeting:

"The operations of Group Health Association, Inc., began on Monday last. Two men who contracted with Group Health Association, Inc. were members of the Medical Society of the District of Columbia, and the third had sent in his application which had been withdrawn in the past ten days. There is nothing to be done about this third member at the present time. The resignations of the other two were received by the Medical Society of the District of Columbia within the week. A letter was sent to each of them asking him to appear before the Compensation Contract and Industrial Medicine Committee. They didn't appear but the committee received a communication from one of them.

"The committee unanimously recommended to the executive committee of the Medical Society of the District of Columbia that disciplinary measures be taken."

Did you hear that? *A.*—My answer is as was stated previously. That is the first I heard anything of that instance.

Q.—You did hear it then? *A.*—Yes.

Q.—Did you object to it then? *A.*—No, sir.

Q.—Didn't that strike a responsive chord in your mind with regard to your own attitude as to such doctors? *A.*—I don't understand.

Q.—Didn't you believe that that statement was a wise course to pursue on the part of the District Medical Society? *A.*—The jurisdiction lay entirely with the District Medical Society and if they believed they had charges to prefer against any physician because of the violation of some of their regulations that was the proper thing to do.

Q.—You knew that they were there seeking your advice for their guidance? *A.*—Yes.

Q.—And you knew this was the first business they took up with you? *A.*—Yes.

Q.—And you would have said, if you said anything, that was a wise course for them to follow?

Mr. Leahy:—Objected to as argumentative.

THE COURT:—Sustained.

Q.—Didn't you regard similar proceedings against doctors similarly situated as a wise course to pursue, and hadn't you similarly instructed a local medical society to pursue the same course in that case? *A.*—Not that I recall.

Q.—Hadn't you been told by the local society in Cincinnati that a Dr. Cook who had been with the Ross-Loos Clinic had come back to Cincinnati and wanted to start up a similar clinic in Cincinnati? *A.*—I had had information to that effect, yes, sir.

Q.—Yes. And didn't that local society write you and ask you for information about the Ross-Loos Clinic and any experience which would guide them in handling this matter? *A.*—They asked me for information.

Q.—Well, was my statement correct (handing a photostat to the witness)? *A.*—Yes, sir.

Q.—And didn't you respond to that letter? *A.*—I did.

Q.—And didn't you tell them two things about the Ross-Loos Clinic: one, that it was your understanding that the Ross-Loos medical group is composed of a number of very competent physicians; and, as for as you know, the quality of medical care seems to be good? *A.*—Yes, sir.

Q.—And secondly this: it is your understanding that each member of the group concerned was required to pay a certain amount per week, prepayment plan, and you were informed that the Los Angeles County Medical Association—which, by the way, is one of your component societies, is it not? *A.*—Yes, sir.

Q.—objected to the operation of this plan by the Ross-Loos group, and that charges were finally preferred against Doctors Ross and Loos. You told them that, didn't you? *A.*—Yes, sir.

Q.—And you told them that those charges were substantiated by the council of the Los Angeles Medical Association, did you not? *A.*—Yes, sir.

Q.—And you told them that on appeal the California Medical Association upheld the action of the Los Angeles Medical Association whereby Doctors Ross and Loos were expelled from membership? *A.*—Yes, sir.

Q.—And you told them that that had been appealed to the A. M. A., did you not? *A.*—Yes, sir.

Q.—And you told them that the A. M. A. had made a decision which expressed no opinion as to the guilt or innocence of the appellants in connection—

Mr. Leahy:—I object.

Q.—with any unethical practices alleged and charged against them? *A.*—Yes, sir.

Mr. Leahy:—I object, until entire statement is read about the A. M. A.

Mr. Lewin:—This letter has been read, and read twice.

Mr. Leahy:—Supposing you read it once more.

Mr. Lewin:—Well, I am not going to do it unless his Honor requires me to.

THE COURT:—All right.

Mr. Lewin:—I have been trying to obey his Honor's suggestion.

THE COURT:—I do not see the point in the question. You asked if he had not advised other associations in local matters. That there is simply the giving of information at the request of the secretary of that association.

Mr. Lewin:—Yes, it is, and I am coming to the point of it in just a moment. I can't do it all at once.

THE COURT:—All right. Let us stick to the point. That is what I say.

Mr. Leahy:—Well, if your Honor please, my objection was this: that he picks out half of a sentence in that letter and says, Didn't you say that half of the sentence?

Mr. Lewin:—Oh.

Mr. Kelleher:—And characterizes it perfectly.

Mr. Leahy:—And doesn't give the whole sentence.

Mr. Lewin:—I have given a very fair characterization of that. Look at it and see if I haven't.

THE COURT:—Come on. I think we are wasting time.

Mr. Lewin:—I know, but here I have had those charges made against me here.

THE COURT:—They are not charges.

Mr. Lewin:—Well, I don't like that.

THE COURT:—That sort of thing is going on between you two all the time.

Mr. Lewin:—Yes, but when I do it I don't get away with it.

Mr. Leahy:—Oh, no, he doesn't get away with it!

THE COURT:—The Judge and the jury do not think you are serious.

Mr. Lewin:—I really don't take it very seriously.

THE COURT:—It takes time. That is the only thing.

Mr. Lewin:—Yes, your Honor, and I am working along here. I haven't had this witness very long.

THE COURT:—You have been putting preliminary questions?

Mr. Lewin:—Yes.

THE COURT:—Put the question you have been leading up to.

By Mr. Lewin:

Q.—Did you intend to leave the impression with this jury yesterday, with regard to that appeal, that the American Medical Association on appeal had exonerated Ross and Loos? *A.*—I intended to leave the impression that the Judicial Council of the American Medical Association had reversed the actions in so far as procedure was concerned.

Q.—Yes. Did you intend to leave the impression that they had exonerated Ross and Loos? *A.*—The question of ethics did not enter into the action of the Judicial Council.

Q.—Yes. It was purely a procedural question. And isn't it true that they expressed no opinion as to the guilt or innocence of those appellants? *A.*—That is right.

Q.—And didn't you say so in this letter? *A.*—I did.

Q.—All right. Now, they were the two bits of information that you supplied, are they not: first, that the Ross-Loos Clinic was giving, as far as you know, competent care of competent physicians; and, secondly, that these two men had been expelled from your local societies in California? *A.*—That is right.

Q.—And you gave that to them as information for guidance of the Cincinnati society, did you not? *A.*—I gave them information that they requested.

Q.—Yes. You were responding to his request for information to guide them, weren't you, in handling their matter? *A.*—That's right.

Q.—All right. *A.*—That's right.

Q.—Now then, weren't you informed that after they got your information they had a meeting in Cincinnati, and they decided that any member—no; they first decided that anybody who ran a clinic like the Ross-Loos Clinic would be guilty of unethical practice and violating your Society medical ethics? Didn't you hear that? *A.*—I didn't hear it.

Q.—Weren't you told that— *A.*—No.

Q.—In the letter? *A.*—Yes, sir. I read it.

Q.—All right. And weren't you also told that they had passed a resolution that in that event nobody could join their society who had any connection with that kind of an organization? *A.*—They had taken a vote on it, yes, sir.

Q.—You were told that, weren't you? *A.*—Yes, sir.

Q.—And you were told also that they had taken a vote on it and had passed it, that no member of their society who had anything to do with that kind of an organization could remain a member of their society? *A.*—That's right.

Q.—Isn't that right. *A.*—That's right.

Mr. Leahy:—If your Honor please, I don't see the materiality of all this side matter.

Mr. Lewin:—You went into it very fully.

Mr. Leahy:—No. You brought out the letter, and I asked him his explanation of it.

Mr. Lewin:—Well, I am asking about the explanation.

THE COURT:—The examination is off on a purely collateral question.

Mr. Leahy:—That's right.

THE COURT:—The question is whether this gentleman did anything to restrain G. H. A. by concert with the American Medical Association or the defendants. Now, what he did with respect to the Cincinnati matter is purely collateral.

Mr. Lewin:—Well, your Honor,—

THE COURT:—It was offered in evidence only to show the background.

Mr. Lewin:—Very well. Haven't I a right to cross-examine him about the background?

THE COURT:—Certainly you have.

Mr. Lewin:—All right.

THE COURT:—But this whole thing has developed because he told you that the main association had no jurisdiction over the local associations as respects local affairs.

Mr. Lewin:—Oh, no, your Honor. I am going—

THE COURT:—You say no, but I think you are wrong.

Mr. Lewin:—Well, now, your Honor, my question was whether he didn't think, at the time he heard what they were doing to Lee and Scandiffio, that that was a wise course.

THE COURT:—No.

Mr. Lewin:—When he heard—

THE COURT:—Pardon me. No; I think, if you look at the record when you get a chance, it will show that you diverted onto this Cincinnati matter because the doctor made the statement that the main association didn't have jurisdiction.

Mr. Lewin:—Well, now, your Honor, my contention is this:—

THE COURT:—The whole point is this: we have taken fifteen or twenty minutes on this one thing; and if you can continually go off on one side and the other away from the main issue in this case, it is just prolonging this interminably. I do not like to interfere with counsel on one side or the other. I mean to be entirely impartial in my criticism. I think that both sides are taking entirely too long on insignificant matters; and I wish that without my interfering you would realize, as I have realized long ago, that it is about time for us to get on with the case and get it determined.

Mr. Lewin:—May I approach the bench?

THE COURT:—I am speaking to both counsel.

Mr. Lewin:—May I approach the bench?

THE COURT:—Not you alone.

Mr. Lewin:—I know that. May I approach the bench? Will you come up to the bench with me, please?

Mr. Leahy:—Surely.

(Counsel for both sides approached the bench and conferred with the Court, in a low tone of voice.)

(There was extended discussion with the Court on the manner of interrogating the witness and on the witnesses' replies.)

By Mr. Lewin:

Q.—Now, Dr. Leland, one more question with regard to the Cook situation: Isn't it true that when you got that information as to what the local society did in that case, you wrote back to them and said that you regarded that as wise proceedings, or words to that effect? *A.*—Exactly.

Q.—Now, didn't you feel the same way when you heard Dr. Hooe tell you that on somewhat similar grounds similar proceedings were being brought against Doctors Lee and Scandiffio? *A.*—I think the two were quite different. The one in Cincinnati was an expression of my satisfaction over the fact that the Cincinnati Academy of Medicine had investi-

gated the situation itself and had voted upon the issues and had settled them within its own jurisdiction.

Q.—Do you mean by that to say that your only interest in that thing was as to a matter of form and that as to a matter of substance? *A.*—I had interest in the substance, but the reference I made in my letter was to the matter of procedure, as I said. Had proceeded wisely.

Q.—But you did feel the same satisfaction with regard to the substance that had been achieved, didn't you? *A.*—The substance hadn't entered my—wasn't expressed in the letter at all, as far as I recall.

Q.—Although you had been asked for information and experience to guide them in what they were doing? *A.*—Well, that was prior to the Society's action.

Q.—All right, sir. Now, you learned also at that meeting, did you not, that there had been an attempt on the part of the local Society to influence the local hospitals against Group Health Association? *A.*—I learned it the first time then.

Q.—Yes. And it was discussed rather fully there, wasn't it? *A.*—I think so.

Q.—Yes. And again did you express any disapproval of that course? *A.*—I expressed no—made no expressions of any kind during the meeting.

Q.—Even though you knew those men were there to get your advice about the subject matters that they brought on? *A.*—That's what they came for.

Q.—And did you hear any criticism of it from your colleagues, Dr. West and Dr. Woodward? *A.*—I did.

Q.—And wasn't that criticism that they didn't know whether such a policy could be effected? Wasn't that Dr. West's criticism, in substance? *A.*—I think he made more criticism than that.

Q.—Yes? *A.*—As I recall it, he questioned whether it was a wise thing to do.

Q.—Now you have an independent recollection now of what transpired at that conference? *A.*—Oh, I have heard that read. I have read it several times since the trial began.

Q.—All right. You look at that. You look at this and see if this doesn't refresh your recollection (indicating an exhibit). Do you have any other information except what is contained here? *A.*—None that I recall independently.

Q.—All right. And isn't this what happened: (reading)

"Dr. Hooe: In the matter of the H. O. L. C. what is your future program?

"Dr. West: It is just exactly the same as it has been all the time. We shall continue fighting it every way we can. We are going to get all the help we can get. We are at least going to keep on until we are instructed otherwise.

"Dr. Hooe: The executive committee recommended that a letter be addressed to the medical boards of the various affiliated hospitals in Washington calling attention to the H. O. L. C. health group, insisting that the hospitals take cognizance of it and, among other things, calling attention to the fact that the physicians employed by such groups are not acceptable to the Medical Society of the District of Columbia.

"In reply to Dr. McGovern's question as to how far the Medical Society of the District of Columbia might go in controlling the hospitals, Dr. West expressed some doubt that the Society can effect such control."

Did you get anything more from Dr. West in response to that question? *A.*—I think there is more—

Q.—Is there? *A.*—later on.

Q.—Will you find it for me? *A.*—Right there (indicating).

Q.—Where? You are pointing to what Dr. Woodward said, or Dr. West? Oh, yes. (Reading)

"Dr. Hooe: Is it not in your opinion most reasonable that the hospitals should acquiesce in this matter?"

And Dr. West said, "It is reasonable that they should do it, but as to whether or not they will, that's another question. Suppose they don't?"

Is that all Dr. West said? *A.*—I don't recall any more that he said on that subject.

Q.—He didn't question the wisdom of it, did he?

Mr. Leahy:—It calls for a conclusion of the witness.

Mr. Lewin:—He said that he thought Dr. West had.

THE COURT:—Well, the paper is there. It speaks for itself.

By Mr. Lewin:

Q.—Now, did you hear Dr. Hooe say this at the end of that colloquy:

"At a meeting of the group of the Medical Society of the District of Columbia last Sunday night"—

Last Sunday would be October 31st, wouldn't it? This was November 6th. *A.*—Yes, sir.

Q.—"it was brought out that all the civilian hospitals in Washington except probably one had fallen right into line, which was very gratifying."

Now, when Dr. Hooe said that, didn't that mean to you that at least eleven private hospitals here in Washington had taken steps in line with the District Medical Society in opposition to Group Health Association?

Mr. Leahy:—I object to the question as immaterial.

Mr. Lewin:—Not very immaterial. It is one of the main issues in the case.

Mr. Leahy:—Argumentative.

THE COURT:—He may answer that. Objection overruled.

By Mr. Lewin:

Q.—What is your answer? *A.*—My conclusion on that would be that they had seen fit to arrange their affairs in accordance with the resolutions and suggestions of the Medical Society. Whether they did that in connection with G. H. A. I wouldn't know.

Q.—Well, is that quite true, Doctor? Is that fair? Was there anything else that was being discussed with regard to the hospitals except Group Health Association (handing a photostat to the witness)? *A.*—That was certainly one issue, but there may have been other issues.

Q.—There may have been. Was there any other issue? *A.*—I don't know.

Q.—You don't know of any other? *A.*—From this record, do you mean? (indicating)

Q.—No. From this record or from any independent recollection which you may have. Was there any other issue there being discussed with regard to the hospitals except to keep Group Health doctors out of them? *A.*—Well, the wording of this report doesn't indicate whether the matter was solely in connection with Group Health Association or not.

Q.—Well, now, Dr. Leland, does it indicate that there was any other subject matter except Group Health Association and the hospitals that was the subject of that colloquy? *A.*—I don't know whether there was or not.

Mr. Richardson:—I object. The document is the best evidence of its contents.

By Mr. Lewin:

Q.—All right. Now, Dr. Leland, did you attend the meeting of the secretaries of the local societies held in Chicago, November 18 and 19, I believe?

Mr. Kelleher:—1937.

By Mr. Lewin:

Q.—1937. *A.*—In Chicago?

Q.—Yes, sir. *A.*—Yes, sir.

Q.—You did? *A.*—I think so, as well as I can recall now.

Q.—And you knew that Group Health Association was to be a subject matter discussed there, didn't you? *A.*—I didn't know it in advance.

Q.—Didn't you? Didn't Dr. West say that it was going to be, at this meeting of November 6th? *A.*—Oh, yes. I recall now.

Q.—Didn't Dr. West say,

"In thirteen days there will be a conference of secretaries and editors of the constituent state medical associations, at which many other officers of constituent state and some component county societies will be present. The whole story of the H. O. L. C. movement will be brought before the conference, and the point of view of the members of the conference can be obtained and presented better than by spending money in writing material. The members of the conference will be given the entire picture, and Dr. Conklin and Dr. Yater, members of the conference, will be given full opportunity to say anything they want to say"?

A.—That is correct.

Q.—And didn't you know that Dr. West was specifically authorized by resolution of the board of trustees to explain the whole matter of the activities of Group Health Association before the conference of secretaries of constituent state medical associations and editors of state medical journals on Friday? *A.*—He was.

Q.—He was. And didn't he actually appear with you before that meeting? *A.*—I don't quite understand what you mean.

Q.—Didn't he go to the meeting with you? Wasn't he there too? *A.*—Well, I don't know that he went with me.

Q.—Oh, well. *A.*—He was at the meeting

Q.—That is right. He was at the meeting. *A.*—Yes, sir.

Q.—And didn't he discuss Group Health Association and the A. M. A.'s attitude toward it before them? *A.*—As I recall it he did.

Q.—And weren't Doctors Conklin and Yater, defendants in this case, representing the District Medical Society there? *A.*—I believe so.

Q.—Did they participate in that discussion with regard to Group Health? *A.*—As nearly as I can recall, they did.

Q.—Did you do it too? *A.*—I don't recall that I made any discussion.

Q.—Yes. Was Dr. Holman Taylor, this gentleman you say was secretary of the State Medical Society of Texas, there?

Mr. Leahy:—I object. It is immaterial, collateral.

Mr. Lewin:—I am leading up to something, your Honor.

THE COURT:—Of what association?

Mr. Lewin:—The State Medical Association of Texas.

Mr. Leahy:—State Medical Association of Texas.

Mr. Lewin:—Dr. Holman Taylor.

Mr. Leahy:—Holman Taylor. The State Society.

THE COURT:—He may answer that question.

The Witness:—I presume he was there. He was a very regular attendant at those meetings.

By Mr. Lewin:

Q.—And weren't you informed shortly after that that Dr. Conklin had brought Dr. Selders' connection with Group Health to the attention of the societies in Texas? *A.*—I have no recollection of anything of the sort.

Q.—Well, didn't you get a copy of Dr. Taylor's letter to the Board of Censors of the Harris County Medical Society (handing a photostat to the witness)? *A.*—Well, if I did I paid very little attention to it.

Q.—Well, did you get it? *A.*—The stamp of the Bureau of Medical Economics is on it.

Q.—Your name is on it up at the top, isn't it? *A.*—That's not my handwriting.

Q.—Well, would you say you got it or didn't get it? *A.*—I did get it.

Mr. Lewin:—Yes. Has this been offered in evidence?

Mr. Kelleher:—Let's see it. No.

Mr. Lewin:—Have you got the original? Have you any objection to a photostatic copy?

Mr. Leahy:—No.

By Mr. Lewin:

Q.—While counsel is looking at that let me ask you this: Didn't you believe, under your construction of the principles of medical ethics, that Drs. Lee and Scandiffio would be subject to expulsion from the District Medical Society?

Mr. Leahy:—I object to that as immaterial.

Mr. Richardson:—I object.

THE COURT:—Objection sustained.

Mr. Leahy:—Would you kindly show that to the Court, objected to as immaterial, irrelevant, collateral, offered once before, and objection.

Mr. Lewin:—It is offered now to show it was acknowledged by this witness.

Mr. Leahy:—It does not show anything.

Mr. Lewin:—I object to remarks of that character.

Mr. Leahy:—Well, I object to yours saying it does.

THE COURT:—I will sustain the objection.

Mr. Lewin:—May I question him about the contents?

THE COURT:—In so far as it may bear upon his testimony. I don't know until you put your question.

By Mr. Lewin:

Q.—Didn't you learn through Dr. Holman Taylor that Dr. Conklin, the secretary of the District Medical Society, had written there with reference to Dr. Selders' connection, and that later Dr. Conklin was going to supply the state societies in Texas with information leading to disciplinary proceedings against Dr. Selders?

Mr. Leahy:—I object.

The Witness:—May I see that?

Mr. Leahy:—As immaterial, collateral, and by indirection attempting to get into evidence a letter which your Honor has just held was not properly in evidence.

THE COURT:—Objection sustained.

Mr. Lewin:—Exception to the objection sustained.

RE-DIRECT EXAMINATION

By Mr. Leahy:

Q.—Doctor, you were asked on cross examination as to whether you gave any advice to the local medical society with reference to public relations counsel, and you said that the advice which you gave was with reference to an executive secretary? *A.*—That is correct.

Q.—Was it or was it not a fact that at that time the District Medical Society was considering the appointment of an executive secretary? *A.*—They were.

Q.—At the meeting of November 6, in Chicago, which has been referred to, did the American Medical Association at that time, through Dr. West or yourself, indicate any action or advice to Dr. Hooe and his representative?

Mr. Lewin:—Objected to, because the document speaks for itself.

Mr. Leahy:—I think that is true, but I just did not want to go into the whole document; that is all.

Mr. Lewin:—He has no independent recollection except what is in the document.

THE COURT:—I think that is correct.

By Mr. Leahy:

Q.—I ask you, Doctor, if it is not a fact that the only advice which was given by Dr. West or Dr. Woodward at the conference of Nov. 6, 1937, was that Dr. Woodward said that both Dr. McGovern—

Mr. Lewin:—Objected to. The document speaks for itself.

Mr. Leahy:—Wait until I finish my question.

THE COURT:—That is true; and if that objection is to be carried through the case, of course all these references to documents would be improper. I have permitted counsel to refer to quite a number of documents.

Mr. Lewin:—The question is whether that is the only thing he gave them. I have already called attention to a number of things he said about it.

Mr. Leahy:—What he said in discussion.

THE COURT:—You may ask the Doctor whether or not he has any recollection of any other things being said than appear in that document.

By Mr. Leahy:

Q.—Have you any recollection of anything that was said other than what is reported in that document? Any independent recollection, I mean. *A.*—I have an independent recollection of some of the things that are in the document, with respect to Dr. Woodward's advice to those two gentlemen.

THE COURT:—That is not the question, Doctor. The question is whether anything was said there in addition to that which is reported in that document.

The Witness:—Nothing in addition to that which is recorded in that document.

. . . . . .

Mr. Leahy:—I will read this, if your Honor please, from page 5 of this document (reading):

"Dr. Woodward. I suggest that you have competent legal counsel advise you. The primary move is clearly to see whether your district attorney or your corporation counsel or the Commissioners or the Board of Licensure or the Insurance Commissioners will act. Whether or not they will act cannot be determined until the facts are formally laid before them."

By Mr. Leahy:

Q.—Have you any independent recollection, Doctor, of any suggestion having been made other than that which appears in the document? *A.*—I have none.

Q.—Have you any independent recollection that Dr. West or Dr. Woodward at any time used the word "suggest" other than that which appears in that document? *A.*—I have no recollection of it.

Q.—You mentioned something about a meeting of some local societies. What meeting did you refer to, or what societies? What was the type or character of the meeting? That is what I wish you to describe. *A.*—I assumed reference was made to the usually annual meeting of the State Secretaries and Editors of State Journals, which meets in Chicago usually about October or November.

Q.—Of each year? *A.*—Not each year, because in some instances a year is skipped, because of some peculiar occasion.

Q.—Was that an ordinary regular procedure, excepting what you have just indicated, for those societies of editors to get together? *A.*—It was.

Q.—Did the meeting in Chicago which you attended have anything whatsoever to do, for the purpose of its call, with G. H. A.? *A.*—No, sir.

RE-CROSS EXAMINATION

By Mr. Lewin:

Q.—Was not the subject of Group Health Association at that meeting of the secretaries given a very full hearing?

Mr. Leahy:—I object. He has already answered that.

Mr. Lewin:—No. You said there was not anything about that meeting.

Mr. Leahy:—I did not say any such thing. What I said was, was the meeting called for that purpose?

THE COURT:—Yes. I think you went into that. I think he answered the question.

Mr. Lewin:—May I ask him whether any result followed from that meeting, as to what they decided?

THE COURT:—As to G. H. A.?

Mr. Lewin:—Yes, sir.

THE COURT:—Yes; you may ask him that.

Mr. Leahy:—Exception, if the Court please, as to what happened. I think if there was a result it is in the form of a resolution.

THE COURT:—If it is, and he recalls it, he may say so.

By Mr. Lewin:

Q.—Did not this happen, that the Secretaries and Editors appeared as a unit in support of the Medical Society of the District of Columbia in suppressing this potentially dangerous institution, Group Health Association? Was not that the action? *A.*—I think there was a resolution presented, but I cannot recall the nature or the wording of it.

Q.—Does my question refresh your recollection that that was the consensus of opinion that was arrived at at that meeting?

Mr. Leahy:—I object, because he has already said that his best recollection was that there was a resolution. They must have it.

Mr. Lewin:—You will have to have it; it is your resolution.

THE COURT:—I think the consensus of opinion would be a proper subject of examination if there was any action taken. You may ask him.

By Mr. Lewin:

Q.—Was action of that character taken? *A.*—I believe a resolution was presented for action, but I do not recall whether it was passed or not.

Q.—May I refresh your recollection by showing you this letter (handing a document to the witness)? *A.*—I do not see that that letter says—

Q.—I did not ask you that. I asked you whether it refreshed your recollection as to what the Secretaries did? *A.*—No, sir.

Q.—It does not? *A.*—No, sir.

Mr. Lewin:—Now, with regard to these excerpts from the exhibit, do you want me to read them at this time?

THE COURT:—If there is anything that is contrary to what was indicated by Mr. Leahy or the witness, you may call it to his attention.

Mr. Lewin:—It is only contrary in the sense that there was other action taken and there were other things said besides the part that was read.

Mr. Leahy:—I admitted that there was a running conversation back and forth; but you will have to find a place in there where there was a suggestion made.

By Mr. Lewin:

Q.—Was there not a suggestion that Drs. Conklin and Yater would have full opportunity to express themselves before this meeting of the Secretaries? *A.*—Yes, sir.

Q.—Was there not a suggestion that that group would be opposed to the H. O. L. C. scheme and they would be asked definitely to carry on? I am pointing to the top of the page. *A.*—There was a suggestion there.

Q.—Was there not also a suggestion—

Mr. Leahy:—Will you kindly read it, please?

Mr. Lewin:—In regard to this conference that we have been talking about:

"What do you anticipate the reaction of the members of the conference will be?

Dr. West. Opposed to the H. O. L. C. scheme. They will be asked definitely to carry on."

Mr. Leahy:—That is characterizing the document—the very objection which was made by the other side.

Mr. Lewin:—You asked me to read it.

Mr. Leahy:—I know I did, because you asked the witness if there was a suggestion, and I asked you to read it so that the jury would know that there was not.

Mr. Lewin:—Do you have any doubt that that is there as I read it?

Mr. Leahy:—Find the word "suggest" or "suggestion."

Mr. Lewin:—Is that in there (handing paper to Mr. Leahy)?

Mr. Leahy:—Find the word "suggest" in there, other than what you have put into the mouth of the witness.

THE COURT:—Let us get along, gentlemen.

By Mr. Lewin:

Q.—Did not Dr. Hooe ask what they could say to their colleagues back home, the District Medical Society? *A.*—I don't remember whether he did or not.

Q.—Did he say:

"Can we say that we have the backing of the American Medical Association in that?"

A.—Yes, sir.

Q.—And did Dr. West say:

"You can say so very definitely, as that is absolutely in keeping with the policies of the organized medical profession of this country"?

A.—That was said.

Q.—Did Dr. West say this in response to Dr. McGovern:

"Dr. McGovern. There is immediate sentiment of the Medical Society of the District of Columbia to formulate some plan."

Was he not discussing some cooperative prepayment plan there?

Mr. Leahy:—I object. The paper speaks for itself.

THE COURT:—I think that is true.

By Mr. Lewin:

Q.—Did not Dr. West say this:

"I do not know whether or not you remember that I suggested, when in Washington some time ago, that you give that idea some consideration, but after thinking about it later I decided that probably I should not have offered that suggestion, because you already formulated a plan and I am not convinced that that plan did not have something to do with the stimulating of this H. O. L. C. movement. A plan almost inevitably tends to create a sentiment for the formation of other similar plans."

A.—He said that.

Q.—Did he not also say this—

THE COURT:—Are you asking him what the paper says?

Mr. Lewin:—I thought you asked me to do that.

THE COURT:—Point it out to the jury yourself. Let us not take up so much time. That is what I suggested.

Mr. Lewin:—I did not know what procedure your Honor wanted me to follow.

THE COURT:—I thought if there was anything there that was contrary to what opposing counsel said about it, you might point it out.

Mr. Lewin (reading):

"Dr. Hooe. In the matter of H. O. L. C., what is your future program?

"Dr. West. It is just exactly the same that it has been all the time. We shall continue fighting it in every way we can. We are going to get all the help we can get. We are at least going to keep on until we are instructed otherwise."

And then, after Dr. Hooe had outlined the situation, Dr. West said:

"Dr. Hooe has not made one statement of any kind that the American Medical Association has not fully considered and acted on where possible."

TESTIMONY OF DR. OLIN WEST

DIRECT EXAMINATION

Olin West said he has resided in Chicago since 1922. He was born in Alabama in 1874. He was educated in public and private schools in Alabama, Howard College and later at Vanderbilt University. He received the degree of doctor of medicine in the Medical School of Vanderbilt in 1898. Following that he worked in several capacities. During the time when he was studying he was teaching chemistry. He was in charge of the chemical laboratory with an associate. He was also instructing in physics at that time while he was taking his course. Afterward he was an assistant to the chair of chemistry; later associate professor of chemistry, and also associate professor of materia medica and therapeutics, and also at one time assistant to the chair of physiology. From the last part of 1898 until the early part of 1910 he practiced medicine in Nashville. While he was practicing medicine he served as secretary to the Tennessee State Medical Association. Later he acquired an interest in public health and became director for the state of Tennessee for the Rockefeller Sanitary Commission and was later elected and served for some years as the state health officer and secretary of the state of Tennessee board of health. In April 1922 he went to the American Medical Association as a field secretary. After a few months the secretary of the Bureau of Health and Public Instruction resigned and he was asked to take over his place. A little later on, in October, the Secretary of the Association died and he was appointed Acting Secretary until the next meeting of the House of Delegates, by the Board of Trustees. He is now the Secretary of the American Medical Association and also has been General Manager since 1924. He is secretary of the Committee on Medical Preparedness of the American Medical Association, also secretary under the provisions of the by-laws of the Association, of its Judicial Council, and secretary of the Council on Scientific Assembly.

The American Medical Association is a federacy of its constituent state and territorial associations. The state and territorial associations are the constituent units of the federacy. The constituent state and territorial associations are composed

of their own county or district societies. There are one or two states in which there are no county societies, but in the place of the county societies they have district societies, largely because the charters of those particular associations are very old and they did not like to depart from precedent. The American Medical Association has no jurisdiction over any constituent or component society except as they have agreed to it and have constituted such jurisdiction by the vote of their own representatives. The House of Delegates of the American Medical Association is the policy-making and legislative organization for the Association, and it is composed of delegates representing the constituent state and territorial associations, selected by those associations. In addition to the delegates from the constituent state and territorial associations, each section of the Scientific Assembly of the Association has one delegate, the Medical Corps of the United States Army is represented by one delegate, the Medical Corps of the United States Navy is represented by one delegate, and the United States Public Health Service is represented by one delegate.

Q.—How frequently does that House meet? *A.*—It meets annually or when special sessions are called by the Board of Trustees or on an expressed desire of a definite number of delegates.

Q.—Is there any machinery set up under which the American Medical Association is administered in between the meetings of the House of Delegates? *A.*—In the interim between the meetings of the House of Delegates the Board of Trustees is authorized to act for the House of Delegates.

Q.—How many are on the Board of Trustees? *A.*—Nine; and in addition to the nine elected members of the Board of Trustees, the President, President-Elect, and Speaker of the House of Delegates are ex officio members of the body.

Q.—From what area is the Board of Trustees drafted or drawn or appointed? *A.*—There is one member of the board from Oregon, one member from Maryland, one from New York and from various other states. An effort is made to have the representatives on the board represent various sections of the country.

Q.—I forgot to ask you this, Doctor. How does one become a Trustee on the Board of Trustees? *A.*—The members of the Board of Trustees are elected by the House of Deiegates.

Q.—How frequently does that board meet? *A.*—The board meets regularly four times a year and occasionally at called meetings.

Q.—Is there any machinery set up in the Association for the administration of its affairs in between the periods when the Board of Trustees meets? *A.*—The Executive Committee of the Board of Trustees meets each month except one month during the summer or unless some circumstance arises that makes it impossible for the Executive Committee to have a meeting.

Q.—How many are there on the Executive Board? *A.*—Three members of the committee; and the Chairman of the Board of Trustees always attends the meetings.

Q.—How is that board elected or appointed? *A.*—The Executive Committee is appointed by the Chairman of the Board of Trustees with the approval of the Board; I believe, on votes, as a matter of fact.

Q.—Are you a member of the Executive Committee? *A.*—No, sir.

Q.—Who constitutes the Executive Committee? *A.*—The Executive Committee at the present time is composed of Dr. Bloss of West Virginia, Dr. Sensenich of Indiana and Dr. Irons of Illinois.

Q.—You are Secretary to the Board of Trustees? Am I correct about that? *A.*—No, sir. The Board of Trustees has its own secretary in the person of Dr. Irons.

Q.—What are your duties as such secretary? *A.*—They are clearly defined in the Constitution and By-Laws of the Association. I perform the usual duties that are generally assigned to a secretary, to report to the House of Delegates and keep the minutes of the House of Delegates, and many other duties that are stipulated in the By-Laws.

Q.—I think you stated to us that you had no vote in the House of Delegates? *A.*—None in the world.

Q.—As General Manager of the Association what are your duties? *A.*—I am a representative of the Board of Trustees to administer the affairs of the Association and its officers with the cooperation of a number of the members of the staff of the Association, the official staff.

Q.—I do not think we have heard definitely yet, Doctor—When was the American Medical Association formed? *A.*—In 1847. I think it was the 5th of May 1847.

Q.—What is its object? *A.*—Its objects are very clearly stated in its Constitution. They are to promote the art and science of medicine and the betterment of the public health.

Q.—Is that the only object? *A.*—Those are the only objects and they have been pursued ever since they were declared in the Constitution, and had been even before the present Constitution was written.

Q.—In the promotion of the art of medicine what does the American Medical Association do for its membership and the profession generally? *A.*—Well, it would take a long story, Mr. Leahy, to tell. The Association, in the first place, publishes THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION and nine other scientific journals, each devoted to some special field. At the present time it is publishing a new journal devoted to military medicine, the medicine of war, generally. It publishes the *Quarterly Cumulative Index Medicus*, which is an index of the medical literature of the world, the only publication of its kind in existence, so far as I know, and one which is published at great cost to the Association.

Mr. Kelleher:—I wonder if it is not immaterial, your Honor, so far as these other publications are concerned.

Mr. Richardson:—I think it is very material.

Mr. Kelleher:—I think THE JOURNAL is material, but I cannot see the materiality of the others.

THE COURT:—I think they show generally what the Association is doing in the promotion of its objects. Do not describe them.

Mr. Leahy:—I am not going into detail, if your Honor please, because it would take too long.

The Witness:—May I explain that through the publication of THE JOURNAL and those special journals and the publication of the *Cumulative Index* we have formed a medium for the discussion of scientific opinion not only in this country but in the world, and thereby it is attempting to promote the art and the science of medicine.

By Mr. Leahy:

Q.—Does it have any publications at all for general public distribution as distinguished from the purely scientific publications for the use of the profession? *A.*—It has a magazine published specifically for the public, called *Hygeia*. It was also published at a loss. It distributes leaflets and pamphlets. I think it is fair to say that it has distributed millions of them that are designed to give the public what ought to be helpful information about the prevention of disease and general subjects pertaining to health.

Q.—In the publication of these pamphlets and the other publications, Doctor, what is the type or the character of the articles which are published and distributed? I mean, more particularly with reference to whether they are factual and informative, or are they argumentative or just to advance certain ideas of the Association?

Mr. Kelleher:—What publication, please?

Mr. Leahy:—Any of them.

Mr. Lewin:—We object to that. It is too broad.

THE COURT:—I think he may say what the policy of the Association is with respect to publications of that kind.

The Witness:—In the scientific publications, Mr. Leahy, THE JOURNAL presents scientific articles and editorials pertaining to scientific matters. It presents abstracts from other publications about scientific medicine, and it also publishes a section devoted to medical organization. It has a department of queries and answers, so that any physician may send a question in to THE JOURNAL, and the necessary investigation may be made with the purpose in mind of making a helpful answer to such question. Thousands of such questions are received, but relatively few of them are published in THE JOURNAL except those that appear to be particularly significant at the time. We have also in THE JOURNAL at present, I believe, a section pertaining to the defense program. In *Hygeia* the effort is made simply to present information that will be helpful to the public. For instance, if—

THE COURT:—I would not go into detail, Doctor.

By Mr. Leahy:

Q.—Now, Doctor, in addition to the publications which you have told us about, is it or is it not a fact that inquiries are received by mail from all sections of the country? *A.*—We have two bureaus of the Association that answer from ten thousand to twenty thousand letters a year, received almost entirely from the public.

Q.—What are the names of those bureaus? *A.*—One is the Bureau of Health Education and the other is the Bureau of Investigation. In addition to that, Mr. Leahy, there is not

a department in the Association that does not answer great numbers of inquiries from the public; and an effort is made to give a helpful answer to every one of them.

Q.—With reference to the Bureau of Investigation, what is the function of that bureau, just generally, without going into too great detail? *A.*—The Bureau of Investigation is concerned largely with fighting frauds and quackery in medicine.

MARCH 19—AFTER RECESS

TESTIMONY OF DR. OLIN WEST

DIRECT EXAMINATION (RESUMED)

By Mr. Leahy:

Q.—We had just finished, I think, the various publications of the American Medical Association. Doctor, to come directly down to Group Health Association, in the District of Columbia, do you recall when it was that you first had any knowledge whatsoever that Group Health Association, Inc., was in existence or being contemplated? *A.*—My first knowledge of its having been called into existence was, of course, when I learned of the charter, but my recollection is that I was informed that the organization of the plan was under consideration in May or possibly late in April, but I have no documentary evidence to that effect.

Q.—Did you at any time come to Washington or discuss with any members of the District Medical Society the matter of Group Health Association? *A.*—Yes.

Q.—Do you recall about when that was? *A.*—I am sorry; I cannot recall the date, no.

Q.—Do you recall what year it was? *A.*—My recollection is that it was in 1937.

Q.—Have you any recollection as to what part of the year it was? *A.*—I am inclined to believe that it was probably in June; possibly late in May; I am not sure about that at all.

Q.—When you got here whom did you see? *A.*—I met with a group of gentlemen who, according to my understanding were all members of the Medical Society of the District of Columbia; some of them, I think, were perhaps officers of that society.

Q.—Do you recall whether you had known any of those before you met them that day? *A.*—Yes, several of them.

Q.—Whom did you know in the group before that day? *A.*—Well, Dr. Hooe, Dr. Ruffin, who was present; and Dr. McGovern, I believe; and my recollection is that Dr. Macatee was there. I can't recall—and Dr. Reede was there; I had met him before. I can't recall who the others were.

Q.—Do you recall where the conference was held? *A.*—My recollection is that it was held at a dinner in one of the Washington clubs.

Q.—Do you remember the name of the club? *A.*—I can't recall it.

Q.—Does the name "Metropolitan Club" mean anything to you? *A.*—I think it may have been Metropolitan; as a matter of fact I am quite sure it was.

Q.—What was your occasion for being in Washington at that time? *A.*—I was here on official business of an entirely different nature, as I recall the matter.

Q.—Was there anybody else there besides yourself from the American Medical Association? *A.*—I believe not.

Q.—What came out of that conference, so far as you were concerned? *A.*—Well, as far as I am concerned, I probably secured some information that I may not have had before about Group Health, and other matters; but in so far as any concrete results having been obtained, I do not recall any.

Q.—Did you make any suggestion or recommendation in the matter? *A.*—I offered a suggestion to the effect that the Medical Society of the District of Columbia might consider the organization of a plan for providing medical service to members of the low-income groups.

Q.—Do you recall now when you made that suggestion whether you had any knowledge as to whether the District Medical Society had been contemplating such a plan? *A.*—My recollection is that the Medical Society of the District of Columbia had not only contemplated such a plan but had given it long consideration and, I believe, had begun the organization of a part of such a plan.

Q.—Where did you go from Washington on that occasion? *A.*—When I left Washington?

Q.—Yes. *A.*—I went back to Chicago.

Q.—Did you attend the convention of the American Medical Association in Atlantic City in June 1937? *A.*—Yes.

Q.—With reference to that convention, can you tell us now whether this conference you had was before or after the convention? *A.*—I can't be sure; I am sorry, but I have an impression it was before.

Q.—Do you recall whether there was anything said at the convention by anybody with reference to G. H. A.? *A.*—I am not sure it was with reference to G. H. A., but with reference to the organization of a prepayment plan for medical services by some group in Washington.

Q.—Who was it made such a statement? *A.*—That was rather generally discussed at that meeting, that evening.

Q.—You refer now to the convention or meeting? *A.*—I mean the meeting in Washington, at the Metropolitan Club.

Q.—At the convention itself of the American Medical Association in Atlantic City, was anything said about G. H. A. or with reference to it by anybody? *A.*—My recollection is that Dr. Woodward made a statement to the Board of Trustees at its meeting held the day before the convention sessions began, and at a later time during the discussions of the House of Delegates Dr. Woodward made a statement to the House of Delegates.

Q.—Were any instructions formulated by either the House of Delegates or Board of Trustees with reference to anything that the American Medical Association should do in the premises? *A.*—In so far as I can now recall there were no instructions.

Q.—Were you present at the meeting of the Board of Trustees in your capacity as secretary? *A.*—Yes. I was not present at all the meetings of the Board of Trustees because I had the House of Delegates on my hands as its secretary, but I think I was present at the time Dr. Woodward made a statement to the Board.

Q.—Have you any recollection now, Doctor, as to when was the next time or occasion when Group Health came to your attention? *A.*—Well, that meeting of the House of Delegates, as I recall it was in June, and my recollection is that there were references to it in or that I received information concerning it in letters from various persons.

Q.—Did there come a time when you, as secretary, attended any meeting of the Board of Trustees in Chicago when the matter of Group Health was discussed in any manner, shape or form? *A.*—Yes.

Q.—When was that, Doctor? *A.*—I am inclined to believe that was in September.

Q.—Do you recall whether or not any action was taken or resolution passed at that time? *A.*—At that particular meeting of the Board of Trustees, I have in mind, Dr. Fishbein and I were instructed to develop the facts and make publication concerning the facts.

Q.—And concerning the facts about what? *A.*—The operations of G. H. A. as an organization and incorporation to provide medical service pursuant to its contract.

Q.—Now, in pursuance of that resolution, what did you do? *A.*—We developed all the information we could, and Dr. Woodward, who had been instrumental in getting a very considerable part of the information we had, was asked to prepare a statement for publication in THE JOURNAL.

Q.—Did there come a time when Dr. Woodward did prepare such a statement? *A.*—Yes.

Q.—Without going into the details of the statement now, do you identify that as the statement which was published in the Oct. 2, 1937, issue of THE JOURNAL? *A.*—My recollection is that it was so published.

Q.—What part did you play personally in the preparation of that statement? *A.*—None whatever, in the original preparation.

Q.—What advice did you give with reference to it, if any? *A.*—I think the only action I took in the matter at all was to go over the statement and, I think, it is possible that I suggested that one or two sentences, perhaps paragraphs, might be changed or removed.

Q.—Up to the time the statement was submitted to you had you any knowledge whatsoever as to what the statement contained? *A.*—No, sir.

Q.—What effort had you made to obtain information about G. H. A., if any? *A.*—I had made inquiries in Washington. I had been given information voluntarily, supposedly voluntary information from persons, I think; most of which came by telephonic communication. I had visited certain persons in official position in Washington and had attempted to secure the facts and present them to the medical profession and, as far as that was concerned, to the public.

Q.—Do you recall whom you saw in the attempt to get the facts: who it was in Washington? *A.*—I talked with the gentlemen I have already referred to. I had talks, I believe, with Dr. Conklin; very short conversations. I attempted to

see him once or twice and couldn't. I had on two occasions conferred with Senator Copeland and with one other member of the Senate at the time I was called to Washington to appear before a committee of the Senate.

Q.—At the time you saw Senator Copeland or any other Senator, what was the information you were attempting to obtain? *A.*—I was trying to secure a copy of the contract that was supposed to have been entered into between Group Health Association and those who purchased its services.

Q.—And of what importance to your mind at that time was this contract which you were seeking to get? *A.*—I thought it was highly important to know whether the contract, whether what was promised by Group Health Association could be delivered to those who bought those contracts: whether the plan was sound and whether it was to render medical service as an incorporation, which we believed to be an illegal thing; and whether it would have an adequate staff, so far as qualifications and numbers were concerned to provide a good medical service, and provide it in quantities indicated in its contract.

Q.—What was the result of your efforts to obtain the contract? *A.*—Absolutely none; we couldn't secure that through any sources available to us.

Q.—Do you recall now whether after this preparation of the article and the efforts you state you made to get the facts with reference to G. H. A., anything happened in so far as you and Group Health Association were concerned between that time and Nov. 6, 1937, when you were present at a conference in Chicago attended by Drs. McGovern, Hooe, Leland, Woodward and yourself? *A.*—Yes, I received a telegram which, as I recall, was signed by Dr. Hooe asking that he and Dr. McGovern, asking if he and Dr. McGovern would see me and Dr. Woodward and Dr. Leland in Chicago on a certain date.

Q.—And in pursuance of that telegram was such a conference arranged? *A.*—Yes.

Q.—And you attended that conference? *A.*—Yes.

Q.—And Dr. Leland and Dr. Woodward? *A.*—Dr. Woodward and Dr. Leland were both there; Dr. Hooe and Dr. McGovern.

Q.—That conference, or the report of it, you have heard read here in evidence? *A.*—I heard an abstract of what was said, what was supposed to have been said at that conference, prepared by a stenographer in my office. It is not a verbatim report by any means.

Q.—We will come to certain portions of it in a moment, Doctor. Do you recall whether now, following that conference on November 6 in Chicago, there was anything else in connection with Group Health Association which came to your attention? *A.*—Well, there were a good many things which came to my attention, but I was a very busy man, with a good many things to do. My time was not devoted entirely to trying to develop the facts with reference to Group Health, and I wouldn't recall to mind offhand the times and occasions when some comment or thing with respect to that organization was brought to my attention.

Q.—Did you ever at any time attend any meetings with the District Medical Society? *A.*—I can't recall that I ever attended but one meeting in the District Medical Society, and that was many years ago.

Q.—Then it is your answer that you never attended any meeting whatsoever with reference to Group Health? *A.*—No, sir.

Q.—Did you ever attend any meeting at which any members of the District Medical Society were present other than the ones you have brought to our attention, in the club and also in Chicago on November 6? *A.*—I visited the offices of the Medical Society of the District of Columbia on one, or possibly two, maybe three occasions: not specifically for the purpose of discussing Group Health Association, however, although I think it is quite possible it was discussed.

Q.—Have you any recollection now of the fact that it was discussed? *A.*—Well, I do recall on one visit I made to the offices of the District Medical Association, Mr. Wiprud, secretary of the Society at that time, and I talked about the matter; and my recollection is at a later time Dr. McGovern came in, either came in the office or I saw him later somewhere, incidentally, and I think it may have been talked about at that time, but I never attended any meetings called for that purpose at any time.

Q.—When you visited the offices of the District Medical Society on the occasions which you did, was your purpose in going there to discuss G. H. A.? *A.*—No, that was not my primary purpose at all.

Q.—Did you ever at any time meet any committee of the District Medical Society on any of the other occasions than the ones you have indicated in your testimony? *A.*—None, other than as I have already referred to, so far as my recollection goes.

Q.—What discussions did you have with Dr. Cutter with reference to Group Health Association, if any? *A.*—I don't think, Mr. Leahy, that I ever had any discussion with Dr. Cutter about Group Health Association until purely incidental discussions much later or considerably after the time of its organization and the announcement of the beginning of its plan.

Q.—What discussions did you ever have with Dr. Leland with reference to G. H. A.? *A.*—I don't recall that I ever mentioned the matter to Dr. Leland until about probably after the time of the Atlantic City session at which the matter was discussed.

Q.—Now, in your discussion with Dr. Leland at this much later date what was the substance of such conversation? *A.*—Purely incidental discussion.

Q.—Have you any recollection now as to what it was that was discussed? *A.*—No, I do know though, because of the nature of such discussions, that any discussion I had with Dr. Leland was not until a much later time; until long after the organization of the group, and was purely incidental in nature.

Q.—Now, after Group Health began its operations, did you then have any discussions with Dr. Leland? *A.*—Yes, and with many other persons, because newspapers were full of it; it was published generally. There were references of all kinds to it, and a little later on, as I already stated, we were instructed to develop the facts and publish them in the bureau publication.

Q.—Do you recall about what date it was those instructions were given? *A.*—My recollection is that it was at the September meeting of the Board of Trustees.

Q.—Now, with reference to Dr. Cutter, have you any information now that Dr. Cutter ever entered into any conference with you or with those whom you were with at any time about Group Health Association? *A.*—You mean during the year 1937?

Q.—And 1938, down to December 20? *A.*—I don't recall any conference that I ever had with Dr. Cutter about the matter at all.

Q.—Do you recall now, Doctor, the various minutes of the meetings of the District Medical Society, that is to say, the minutes of the Society itself, minutes of its executive committee meetings, both regular and special meetings. They were introduced here in evidence in this case? *A.*—I knew nothing about the minutes of the Medical Society of the District of Columbia.

Q.—When did you first see them, or hear about the matters and things discussed therein? *A.*—I am sorry I cannot tell you the exact date I first heard about it.

Q.—Did you know about that before you heard them read in the court room, as to what the minutes purported to state? *A.*—I think it is probable that I may have seen extracts from the minutes of the Medical Society of the District of Columbia that were sent to our offices. As to whether they were sent to me or sent to somebody else in the office, I don't know, but I think it is quite probable that I may have seen extracts or perhaps a resolution; something of that kind.

Q.—Other than those sent in the shape and manner in which you just indicated, what information had you with reference to any of the matters and things contained in the minutes introduced here? *A.*—I don't think I had any information about it. It was not my business.

Q.—And with reference to letters other than those which were introduced as having been received or written by you, prior to their introduction here in evidence what knowledge have you of them? *A.*—I think I may have seen some of them, but I can't recall which ones.

Q.—What was the practice in the American Medical Association at the time, Doctor, when letters came into the Association? *A.*—You mean the general mail?

Q.—Yes. *A.*—All the mail that comes into our office is carried to a mailing department and is all opened there except such items as are marked "Personal," and the mail is then distributed all over the building from that central place.

Now, there are times when very heavy mail makes it impossible for the mailing department to open it promptly enough to get the mail to the various desks in the building and then it is sent unopened to the various departments, but generally speaking it is all opened at the central office.

Q.—There were certain letters introduced which I am going to show you in a minute; some of them would bear your name, and then there are copies sent to you, Dr. Leland or Dr. Cutter. Who would determine whether copies of such letters should go

to any one other than the ones to whom the letter was addressed? *A.*—They were sent from the central distributing point where the mail was opened to whomsoever addressed.

Q.—How would the copies be provided for others in the offices? *A.*—You mean copies which originated in our offices?

Q.—Yes. *A.*—Well, a letter would come to me that I thought concerned another department, and unless there was some reason why it should have my personal attention I would refer it to the department to which it should be properly referred.

Q.—Would that be true in reference to a letter which went to another department and with respect to which if the addressee said it interested or concerned your department: would he do likewise? *A.*—It is very frequently done.

Q.—Now, there were some letters introduced here, Doctor, to which I want to draw your attention. I am going to show you first, a letter dated the 19th day of October, 1932, Exhibit for the Government 144. Will you glance at that letter now and see if you have any distinct recollection of it, or any sort of a recollection? *A.*—I think that was a letter I wrote, as Secretary of the Judicial Council.

Q.—Now, you say in that, as Secretary of the Judicial Council:

"I have been instructed to send you a copy of the decision of the judicial council of the American Medical Association in the appeal of Dr. R. W. Baird, et al. from the decision of the Board of Councilors of the State Medical Association of Texas, this appeal having been heard by the judicial council in Chicago on Sept. 21, 1932. This decision is as follows:"

Do you recall on whose instructions that was sent?

A.—Sent on the instructions of the Judicial Council issued me as Secretary of the Council.

Q.—Did you at the time have any independent knowledge as to the facts which entered into the decision of the Judicial Council? *A.*—None whatever other than that I had heard the discussions at the time the Judicial Council gave it official consideration; this appeal.

Q.—And did you have any independent recollection of the facts on which the decision of the Judicial Council was based? *A.*—I didn't, no.

Q.—All you did, therefore, was under the instructions of the Judicial Council, send a copy of this decision? *A.*—I think that is all that is in that communication; the only other thing besides that is the notation in which I say that copy of the decision is forwarded to the secretary of the state association.

Q.—Doctor, as Secretary of the Judicial Council, what part did you play back in 1932, if any, in the deliberations of the Council? *A.*—None, whatever, unless I was asked to speak to some question that the Judicial Council thought I could answer about some matter brought up. I had nothing whatever to do except serve as Secretary and perform the functions of that office. I had no vote.

Mr. Leahy:

"DECISION BY THE JUDICIAL COUNCIL

"EXHIBIT 144

"The fundamental issue in dispute in this case is the ethical character of certain contracts held by the appellants to give medical service to groups of people on a monthly per capita plan of payment. No essential facts of the contracts were in dispute.

"It is contended by the appellants that these contracts are not in violation of all or any of five conditions which the Judicial Council has declared at various times are conditions which, obtaining, make a contract unethical. The Dallas County Medical Society which sentenced these appellants to suspension contended that these contracts violated all five of these conditions. When, in its constitutional function as authority over ethical matters, the Judicial Council expounds the subject of contract practice and lays down certain principles which when present create an unethical contract it is safe to be assumed that those are the only principles which may have that effect. A fundamental of medical ethics is that anything which in effect is opposed to the ultimate good of the people at large is against sound public policy and therefore unethical. On the five points mentioned the appellants presented a strong argument which might be convincing if a narrow or local view only is considered. Nevertheless the Judicial Council is of the unanimous opinion that this type of contract is unethical on the basis of being contrary to sound public policy.

"The appellants were at the same time convicted of violation of a by-law of the society forbidding the holding of certain contracts and pleaded error in the trial on a technical procedure. This phase of the appeal was not pressed by either side but from such records as were submitted to the Council it is of the opinion that no reversible error was proven."

Q.—Do you recall how many there were on the Judicial Council in 1932? *A.*—There were five members.

Q.—And from whence are they drawn? *A.*—They are elected by the House of Delegates.

Q.—I now show you Exhibit 138, dated Jan. 31, 1935. I will ask you to look that over, Doctor, and tell us whether or not you have any recollection now as to whether that is a carbon copy of an original letter which you sent on that date to the addressee therein named. *A.*—I think I wrote that letter.

Q.—Have you any independent recollection now of having done so? *A.*—I wouldn't have recalled it unless it had been brought to my attention.

Q.—At this time if the initials in the corner "O. W." didn't appear thereon, is there anything in the contents of the letter itself which refreshes your recollection of the fact that it had been dictated by you? *A.*—Well, I wouldn't say that I might have recognized it as one of my productions.

Q.—I call your attention to the opening paragraph of the letter, which is addressed to Dr. Angus McLean, Detroit, Mich.

U. S. EXHIBIT 138

"Dear Dr. McLean:

"I regret exceedingly that because of the tremendous press of work, a massive correspondence and unusual demands on my time, I have found it utterly impossible to make prompt replies to many letters that have come to me within the last six weeks. Among those that have unavoidably accumulated on my desk is your letter of January 10."

By Mr. Leahy:

Q.—Doctor, what occasion had you for writing this letter other than the letter written to you by Dr. McLean? *A.*—None, sir.

Mr. Leahy:

"The Ross-Loos Clinic in Los Angeles was established some years ago and operated in the usual manner as a clinic quite similar to numerous other groups of physicians in various parts of the country. A year or two ago, more or less, this clinic group entered in agreements with the employees of certain organizations, or with the organizations themselves, whereby the clinic agreed to provide necessary medical service for stipulated sums, the idea being, as I understand it, that each employee concerned should pay a certain amount each month into a common fund and that the clinic should be paid on the basis of the number of employees concerned in the various groups. Among the groups that entered into this arrangement, as I am informed, was the group composed of firemen employed by the city of Los Angeles.

"It is claimed by the Ross-Loos Clinic and, according to my information, by the members of the groups who have arranged to secure medical service through that clinic that the plan has been mutually satisfactory. The Los Angeles County Medical Association, however, appears to have considered the scheme to be unethical. Doctors Ross and Loos were cited to appear before the proper official body of the Los Angeles County Medical Association and were dropped from membership in that organization after a hearing of the charges preferred against them. Drs. Ross and Loos appealed from the decision of the Los Angeles County Medical Association to the Council of the California Medical Association, and that Council upheld the decision of the county society. I understand that Drs. Ross and Loos intend to appeal to the Judicial Council of the American Medical Association, but up to this time no appeal has been filed.

"I can offer you nothing more than my personal opinion concerning contracts of the kind which seem to have been made between the Ross-Loos Clinic and various groups. That opinion is to the effect that all such arrangements are potentially dangerous to medicine and are not in the public interest. I am quite sure that some of the professional groups that have entered into such contracts are thoroughly capable and that they have no doubt given good service under these contracts. In my opinion, the weaknesses and dangers of contract practice are, however, inherent in all of these plans. When one such group of physicians appears to have succeeded financially in an undertaking of this kind, their success will almost surely stimulate the development of similar schemes under the direction and control of less competent and less responsible persons with the result that a vicious circle of underbidding will be established, and inevitable deterioration in the quality of medical service will result.

"I am asking our Bureau of Medical Economics to send you some printed material having a bearing on this general subject."

By Mr. Leahy:

Q.—Doctor, so far as the facts which you stated in regard to the Ross-Loos Clinic in that particular letter are concerned, did they or did they not reflect the information you had with reference to the facts you disclosed? *A.*—Yes, they did.

Q.—Do you recall whether the appeal which you mentioned in this letter of Jan. 31, 1935, finally came to the Judicial Council for its decision? *A.*—Yes, it did.

Q.—And with what result? *A.*—Well, the appeal came from the decision of the Council of the California Medical Association. Dr. Ross and Dr. Loos had appealed to the Council of the California Medical Association, which is the state association, from a decision of the Los Angeles County Medical Society.

Q.—Is that a county association? *A.*—The Los Angeles County Medical Society, which is a component unit of the California State Medical Society, and then they appealed, that is Dr. Ross and Dr. Loos appealed to the Judicial Council of the American Medical Association from the decision of the Council of the California Medical Association, and that appeal was heard by the Judicial Council and reversed in accordance with or on the grounds of errors in procedure, and failure to be guided by the organization's law of the Los Angeles Medical Society, and the California State Medical Association, one or both.

THE COURT:—Is it necessary to go into the details?

Mr. Leahy:—This is just corroborative of the testimony of Dr. Leland. I asked him if that appeal was heard.

Q.—Now, you stated that the appeal was reversed on procedural grounds. I want to ask you, briefly, what other jurisdiction has the Judicial Council on an appeal to it from any constituent state association, than procedural jurisdiction? *A.*—Those matters are covered by the provisions of the constitution and by-laws of the association, and it is specifically stipulated that the judisdiction of the Judicial Council in such appeals be only with respect to questions of law and procedure; that is, organization law and procedure.

Q.—In other words, has the Judicial Council, or had the Judicial Council, in the Ross-Loos case any jurisdiction to determine the merits of the controversy between Drs. Ross and Loos, and the County Medical Society? *A.*—No, sir, under the by-laws the decision was based on the rulings on law and procedure.

Q.—I will ask you, whether following the reversal by the Judicial Council of the Ross-Loos case, that particular case has ever come before the Judicial Council again? *A.*—No.

Q.—Are Drs. Loos and Ross members of the American Medical Association now? *A.*—They are, unless their membership has recently been terminated in Los Angeles, by the Los Angeles Medical Association and the California State Association.

Q.—When was the last time to your knowledge they were members of the American Medical Association? *A.*—I haven't made any particular investigation of it, but we have monthly reports from each constituent state association; they are received some time during each month.

Q.—And have you received any information that Drs. Ross and Loos have ever been stricken from the rolls of the Los Angeles Medical Association or the California State Association? *A.*—I think they were temporarily, but I think their names were restored, perhaps after the appeal to the Council; that is however not a matter of actual knowledge, so far as I am concerned.

Q.—Now, you stated in the paragraph of your letter that you could offer nothing more than your personal opinion concerning contracts of the kind which seem to have been made between the Ross-Loos Clinic and these various groups. When you stated that you offered only your personal opinion, to what did you refer? *A.*—I referred to my belief that many of the schemes of this particular class are potentially dangerous, and that belief is founded on long observation and experience, not only on my own, but on the experience of the medical profession.

Q.—Have schemes of group practice been numerous, or otherwise, throughout the United States?

Mr. Kelleher:—Objected to as irrelevant unless he further defines what he means by group practice, your Honor.

By Mr. Leahy:

Q.—I will clear that up. Would you kindly tell us what you mean by group practice? *A.*—Well, I think that because of common usage of words and language that you could get several definitions of group practice, but in my own conception of group practice I would generally consider it as a practice carried on by a group of physicians, acting on their responsibilities, and not responsible to any one else who band together for the purpose of furnishing complete medical service—complete as possible, depending on the number in the group and the kind of work the members did.

Q.—Within the definition just given, can you tell us whether there have been various such groups throughout the United States who have bounded themselves together for the carrying on of such practice?

Mr. Kelleher:—Group practice, not prepayment.

The Court:—What does your allegation in the indictment say?

Mr. Kelleher:—It says group practice on a prepayment basis.

Mr. Leahy:—We have had in here this decision; it doesn't say what kind of practice it is.

Mr. Kelleher:—May I read. It is from Exhibit 144: "The fundamental issue in dispute in this case is the ethical character of certain contracts held by the appellants to give medical service to groups of people on a monthly per capita plan of payment."

The Court:—What I have in mind is this: A great many documents have been offered solely on the ground, as a matter of background, among which were letters indicating that the American Medical Association and its officers had been opposing these plans which, if my recollection is clear, refers purely to group health prepayment plan.

Mr. Kelleher:—I really think our evidence is limited to group practice prepayment plans. We make no contention that the American Medical Association has opposed all the group plans. I think all our documents relate to group prepayment plans.

The Court:—If that is true I think it ought to be limited accordingly.

Mr. Leahy:—I don't think that is the situation. I don't agree with counsel, because I think the letters introduced here, as having been written by Mr. Laux, letters written by Mr. Simons, and from Dr. Leland's department; also Dr. Leland's letters, were offered in evidence to the point that just as your Honor stated, the American Medical Association was opposed to all kinds of group practice in medicine. They have laid emphasis wherever they could find it in a letter on "contract practice of medicine," "group practice," giving the impression that the American Medical Association was opposed to all kinds of practice in which contracts were involved, whether in groups of doctors or individuals; whether producer groups or consumer groups, as they have been designated here in the trial; and I just want to show it is not the fact; that the American Medical Association has never opposed group practice as group practice, or contract practice as contract practice; and I want to show very definitely the type and character of both group and contract practice which the American Medical Association has opposed and fought.

The Court:—I think they may show that if confined to practice of a particular kind, as distinguished from any general collective practice, either through groups of doctors or consumers. Objection overruled.

By Mr. Leahy:

Q.—Doctor, I will put the question again, instead of looking back for it.

What have you to say as to groups, both consumer and producer groups of doctors and individuals: Have they been organized in the United States and throughout the United States to a great or small extent? *A.*—In a very great number.

Q.—With respect to such groups has the American Medical Association at any time determined upon any policy with regard to them? *A.*—The House of Delegates of the American Medical Association at a session held in Cleveland, I believe, in 1934, outlined and adopted a set of principles that were intended to serve for the guidance of prepayment group plans; that is, plans for the provision of medical services; also income groups.

Q.—I want to ask you the question directly whether the American Medical Association has been opposed, as a general policy, to all group practice, whether prepayment or otherwise, in the United States? *A.*—No, sir.

Mr. Kelleher:—Just a moment, I think that question should be broken down, first as to group practice.

By Mr. Leahy:

Q.—I will break it. I will ask this, Doctor: Has the American Medical Association ever declared a policy of being opposed to all so-called producer groups of practice of medicine in the United States? *A.*—You will have to define what you mean by "producer groups."

Q.—The producer group as represented by the clinic wherein groups of doctors have come together in order to render complete medical service to those it seeks to serve.

Mr. Lewin:—That description fits Group Health Association, which is certainly not a producer group.

The Court:—Well, the doctor stated that these principles adopted, I think he said at Cleveland, were for the purpose of suggesting or guiding the attitude of the American Medical Association members with reference to prepayment plans of medical care. That, of course, would include such groups from the viewpoint of the doctors, as well as the patients. He has spoken of it in a general way. I think the subject should be dealt with in a general way, rather than broken down. Put your next question and I can rule on it.

By Mr. Leahy:

Q.—Doctor, has the American Medical Association ever declared any policy against group practice of medicine as such? *A.*—No.

Q.—What type or character of group practice has the American Medical Association opposed itself to in the past? *A.*—It has opposed and it is opposed to any group practice which offers to do more than it is believed can be done under the terms under which its services are to be delivered. It has opposed group practice that is controlled by corporations, because it believes that a corporation cannot engage in the practice of medicine; cannot qualify to engage in the practice of medicine. Those are two of the general grounds. It is also opposed to group practice where conducted by men who are known to be disreputable or irresponsible, and who have established a record of irresponsibility and for lack of professional qualifications and lack of appreciation of professional ethics.

Q.—Where a group is practicing who are qualified so to do, and rendering complete medical care in accordance with the contract offered, what has been the attitude of the American Medical Association toward them? *A.*—The American Medical Association has had no attitude toward it, other than to offer principles for the guidance of the nature of its work.

Q.—And are there today members of the American Medical Association who are engaged in the group practice of medicine? *A.*—Many of them.

Mr. Lewin:—Which type are you talking about?

Mr. Leahy:—Any type.

The Witness:—Many of them.

By Mr. Leahy:

Q.—And have been over a period of years? *A.*—Yes.

Q.—Now, when you referred in letter, which you just identified, to the statement,

"When one such group of physicians appears to have succeeded financially in an undertaking of this kind, their success will almost surely stimulate the development of similar schemes under the direction and control of less competent and less responsible persons with the result that a vicious circle of underbidding will be established."

had you anything in your own experience in mind, Doctor? *A.*—Yes, definitely. About the time this letter was written, and more particularly in the years preceding it, a great number of contract and group plans of various kinds had developed, some of which offered far more than they could possibly deliver and some of which, according to our best information, had no intention of doing it; and, in several instances—I have one in mind at the moment—where an organization of this kind was developed by responsible groups, irresponsible groups developed the same sort of a program, offering far more for far less, when anybody who knew anything at all about the facts knew it would be impossible for it to give good medical service.

By the way, there is another ground of opposition to any kind of group practice that delivers service, and that is the kind concerning which the American Medical Association, or the District Society, can develop evidence showing that the service is poor and is apt to be as harmful as helpful. Certainly it opposes it.

Q.—What character of opposition does the American Medical Association institute as to such groups as you mention? *A.*—None, other than to attempt to develop the facts and make them known.

Q.—And through what medium are the facts investigated? *A.*—Through any honorable medium we can find.

Q.—And through what medium are they made known? *A.*—Through the publication in the Association's own publication and to some extent through communications, and in reply to letters received, communications received; not always letters—telephone messages.

Q.—Does the American Medical Association institute any other methods of opposition than the ones you have just mentioned? *A.*—I would say no; that whatever it does is intended to carry out the purposes I have indicated.

By Mr. Leahy:

Q.—Doctor, the very opening sentence of your letter, as shown by the carbon copy under date of Feb. 6, 1936, is:

"Your letter of February 4 has just come to hand."

What other occasion had you for writing than the fact that you had just received a letter when you wrote No. 141, the carbon of which you hold in your hand? *A.*—I presume you want me to refer to any circumstances that may have occurred before I received this letter? I received a letter from Dr. Frieburg to whom my letter is addressed.

Q.—Doctor, in this letter you state as follows:

"I am sorry indeed to know that anybody in Cincinnati is preparing to begin operations of a plan made more or less famous, or infamous, according to the point of view, by Drs. Ross and Loos in Los Angeles. I am quite convinced that the Ross-Loos scheme is a violation of the principles laid down by the courts of California which have repeatedly insisted that the corporate practice of medicine is illegal in that state. I am just as strongly convinced that it is relatively easy to evade the law. What is in effect a corporation may be organized under the designation of partnership. I believe that schemes of the Ross-Loos type will inevitably tend to the creation of a demand for the solicitation of medical practice, and I am quite convinced that the operation of such schemes will inevitably cut the ground from under the feet of the private practitioner."

When you stated that "schemes of the Ross-Loos type will inevitably tend to the creation of a demand for the solicitation of medical practice," to what did you refer? *A.*—I referred to the fact that, as I stated a few minutes ago, the operation of such plans very frequently leads to the development of other plans by less responsible persons, in many instances, who do not hesitate to resort to any method that may be available to them for securing practice.

Q.—When you said "solicitation" what did you refer to by that? *A.*—I meant asking patients to come to an individual or to a clinic or anything else, whether it be an institution or an individual.

Q.—Is the American Medical Association opposed to the solicitation of patients? *A.*—The principles of medical ethics of the American Medical Association, which have been adopted independently by the constituent territorial associations, with perhaps one association that has adopted it in a way, but which has its own code of ethics also, distinctly declare that the solicitation of patients is an unprofessional procedure.

Q.—What is the basis of the principle of ethics that solicitation is an unethical procedure? *A.*—Just a common basis, that a man who goes out and begs patients to come to him and offers some attraction to come to him is guilty of an unethical practice. He has nothing to sell other than his own qualifications and knowledge and ability as a practitioner; and it certainly is not the part of an ethical physician to glorify himself to patients and to solicit by patronage.

Q.—In the experience of yourself as the manager of the American Medical Association, what had you observed with reference to certain groups practicing medicine in relation to the solicitation of patients to come to those groups?

Mr. Lewin:—We object to that.

THE COURT:—Read the question, Mr. Reporter.

(The pending question was read by the reporter as above recorded.)

Mr. Leahy:—I will complete it by saying "and which you had in mind, if you did have it in mind when you wrote the letter which is numbered 141."

Mr. Lewin:—That is argumentative.

THE COURT:—You may ask him if he was speaking from personal knowledge. You see what it means: you open up each particular case for collateral inquiry. I want to avoid that if possible.

Mr. Leahy:—I will do that, your Honor.

By Mr. Leahy:

Q.—Were you speaking from personal knowledge, or otherwise, Doctor, when you made that statement in the letter to which I have just drawn your attention? *A.*—I was speaking entirely from the results of my own personal observation.

Q.—You wrote in that same letter:

"I am informed that Drs. Ross and Loos are thoroughly competent physicians and that they have associated with them young men who are well qualified. I have heard from various sources that the Ross-Loos clinic actually delivers good medical service. These two facts, of course, operate very strongly against any movement designed to put a stop to the utilization of mass production methods in the practice of medicine and to preserve the individual private practitioner as the most important entity in the field of medicine. It would take a great deal of argument to convince me that any scheme to use mass production methods will operate to the advantage of scientific medicine or in the interest of sound public policy."

Doctor, to what did you refer when you stated that mass production methods in the practice of medicine were not in accordance with what you believed to be good, sound public policy? *A.*—Of course I meant exactly what I said, that I did not believe it is possible to practice medicine on a mass production basis and do justice to the patient or to deliver the best quality of medical service under any such conditions.

Q.—Why is that, Doctor? *A.*—Simply because one individual patient may require three hours for proper attention and another may require ten minutes; and what is good for one patient may not be good for another who has exactly the same diseased condition. They have got to be handled separately and examined separately, and all the factors that enter into the diagnosis and treatment have to be individually considered.

Q.—When you stated to Dr. Frieburg that you had information that Drs. Ross and Loos were both able and qualified men and that they had about them a staff of qualified physicians, were you giving the correct information that you had at hand at the time? *A.*—Yes; and I would like to say, if I may be permitted to do so, that this letter was written in 1936, and that in a letter, or maybe one or two letters, that I had previously written I had not made the same statements, for the reason that I did not then have that information.

Q.—In other words, the information which you gave to Dr. Frieburg in 1936 was based on information which had come to you in between the time of previous correspondence and this? *A.*—It had come later. I had written some of the other letters in which I did not make a similar statement. I tried to be perfectly fair to those men. I had lines from men who knew the quality of their practice, and I had conferred with Dr. Loos himself, and I did not hesitate to make the statement that is made in that letter, that I had information that they were com-

petent physicians. I believe I stated in one place that they had surrounded themselves with a staff of competent physicians. I certainly had no idea of doing them any injustice, and I tried to do them full justice.

Q.—(Reading further):

"I am rather inclined to the opinion that each separate county medical society will have to deal with the questions involved and the matters referred to in your letter on the basis of conditions that actually exist in its own community, and I am sorry that I cannot offer you any very helpful suggestion.

"With my sincere good wishes I am

"Very truly yours."

What did you refer to, Doctor, when you made the statement in the letter that "each separate county medical society will have to deal with the questions involved on the basis of conditions that actually exist in its own community"?

Mr. Lewin:—Is there any ambiguity about that?

Mr. Leahy:—Yes. It is very important.

Mr. Lewin:—I object to it.

THE COURT:—I think you may ask him to state his reasons for that statement.

By Mr. Leahy:

Q.—Will you state the reasons for that statement? Or, in other words, Doctor, what is there about the practice of medicine as it refers to group practice that is different in one community from conditions existing in another community? *A.*—The American Medical Association has been rather severely criticized for not having produced a plan of private medical service for the members of low-income groups in all the United States. The American Medical Association has made a very determined, persistent, and honest effort to develop such a plan, but it becomes perfectly apparent on a study of the situation that it cannot be done. A plan that would serve satisfactorily in an industrial state, like New Jersey or Pennsylvania, could not possibly be applied successfully in an agricultural state like Mississippi. As a matter of fact, no single plan can be prepared or operated by anybody that will work with equal success in all parts of an individual large state; and we have become thoroughly convinced of that after careful and conscientious consideration of the factors involved. Moreover, the American Medical Association believes that it is the right and the duty of the component county medical societies to take the leadership and deal with affairs within their own jurisdictions; and the American Medical Association has no intention or desire to dictate to a component county medical society or state medical association what it shall do or shall not do. Its only purpose is to be helpful, simply to carry out the purposes declared in its constitution, to promote the art and science of medicine and the betterment of the public health. That can be done by the extension of medical service and by the protection of the quality of medical service; and that is all it can do.

. . . . . .

Q.—Is Dr. Baker a friend of yours? *A.*—Dr. Baker is the executive officer of the State Board of Health of the State of Alabama. I have known him for many years.

Q.—You state, Doctor:

"I am greatly obliged to you for your kindness in sending me a copy of a communication dated February 25, addressed to the presidents of certain county medical societies in Alabama and to the chairman and members of the Committee on Public Relations of the Medical Society"—I guess that is "Association" written over—"of the State of Alabama.

"I am glad indeed to know that the Tennessee Valley Authority is in no way officially concerned with the problem of medical care. I sincerely hope that the county medical societies in the counties directly interested will give most careful and exhaustive consideration to any plans that may be proposed for providing medical service on a group basis. Confidentially I may say to you that the more I hear and think about many of the experimental plans now in operation the more concerned I become. I cannot but feel that there are grave dangers inherent in practically all of them and that they tend toward the development of a sentiment for state control of medical practice. I wonder if any of them have a sound actuarial basis. I wonder if it is wise to teach people that it is possible to render really good medical or really good hospital service for a nominal sum. Personally I do not believe that it is possible, whether it be done on a group basis or otherwise. I am very much afraid that a tendency has already developed to raise the ante, so to speak, in many of these experimental plans, either by increasing the income limit so that the supposed benefits of the plan may be made available to those groups the incomes of the members of which are large enough to enable them to pay for needed medical service, or by increasing the membership fee. Moreover, I am fearful that the group hospital plans which are rapidly developing and which in many places are being tied up with other plans for providing medical service, may result in putting the hospitals directly into the practice of medicine. There is no doubt in my mind that this very development is now in progress, and I am almost willing to predict that it will not be very long in some places before the professional members of hospital staffs will find themselves dictated to by lay boards and lay administrators as to what they shall do and what they shall not do.

"Please understand that this letter is in the nature of a purely personal chat. I do not of course wish to discourage the efforts of any medical society that has given full consideration to the problems that have arisen within its own jurisdiction and that has become convinced that some sort of experimental plan is necessary."

When you wrote that last paragraph, Doctor—

"I do not of course wish to discourage the efforts of any medical society that has given full consideration to the problems that have arisen within its own jurisdiction"—

were you then referring to the statement which you gave us a moment ago that each local medical association should determine the problems within its own jurisdiction? *A.*—Yes; I was referring to that. I was also referring to the fact that the House of Delegates of the American Medical Association had encouraged societies that, after careful investigation of the facts on the basis of their best judgment, believed that it was necessary to develop some sort of unusual plan to provide service for the members of low-income groups and should undertake it on an experimental basis; and a number of societies in various parts of the country had initiated such plans after they had studied conditions within their own jurisdictions.

Q.—Were they group plans? *A.*—They were plans that were organized by the medical societies themselves, and every member of which, that was willing to participate in it, was available for any person that desired his services.

Q.—Were they on a prepayment basis? *A.*—I think most of them were. Some of them, according to my recollection, were not.

Q.—Doctor, is it your custom and has it been since you have been secretary and manager of the American Medical Association, to attend each and every convention of the American Medical Association? *A.*—Not only my custom; it is my duty.

Q.—In accordance with that duty did you attend a convention of the American Medical Association when a resolution was adopted or action taken by the House of Delegates with reference to hospitals practicing medicine? *A.*—I think I recall a resolution or an action of that sort; yes.

Q.—I do not want to take the time to find it, but do you recall that in two of the reports of the House of Delegates action of that sort was referred to the attention of Dr. Cutter when he was on the stand? *A.*—I do not know what resolutions you have in mind. Do you mean, referred to Dr. Cutter during the hearing of this case?

Q.—Yes, when he was on the stand. *A.*—Yes. I heard what went on when he was on the stand.

Q.—Do you recall the resolutions which were adopted, or some action looking toward the end I am about to mention, by the House of Delegates, wherein it was suggested that there be cooperation between the Judicial Council and Dr. Cutter's bureau with reference to certain evils existing? *A.*—Yes, sir.

Q.—I will ask you if you can now recall what date it was or what year it was that the action was taken? *A.*—I am sorry, but I cannot remember.

Q.—What have you to say, Doctor, with reference to the statement made in your letter on hospitals practicing medicine? In your judgment, is that or is that not in the public interest?

Mr. Kelleher:—Objected to, your Honor, as immaterial.

THE COURT:—I think so.

Mr. Leahy:—No. 142 is dated March 14, 1936, directed to Dr. West, the American Medical Association, Dearborn Street, Chicago, and reads as follows:

"This is merely a personal note to you for your information and use as you may think best. It may be known to you that Dr. George N. Cooke has been and is trying to organize a group clinic in Cincinnati on the identical plan of the Ross-Loos clinic in Los Angeles. Dr. Cooke is a member of the Butler County Medical Society but not of the Cincinnati-Hamilton County Academy of Medicine. Cooke addressed the Council of the Academy asking what would be its attitude towards members joining his group. The Council referred this to the committee on the Costs of Medical Care of which I am chairman. This committee advised the Council that no reply to such a question was coming to any one not a member. Upon advice of the committee the Council submitted the matter with full information regarding all of the circumstances to the Academy as the special order of business of March 10. They submitted three questions to which they requested specific replies. In substance these were (1) Does practice under such a prepayment group plan constitute a violation of Article 6, Section 2, of the Principles of Medical Ethics? (2) Should membership in the Academy be withheld from practitioners who are practicing in such violation? (3) Shall practice by members of the Academy in such violation be considered sufficient ground for the termination of membership?

"The meeting was well attended and the vote was in the affirmative, with only four dissenting. There was ample discussion with but one speaking for the negative. The meeting was not executive purposely. There was some adverse newspaper comment with the usual misunderstanding of the real issue.

"It is the object of this letter to furnish you with this information to invite your frank comment and to suggest that if you wish full information you write to the secretary of the Academy requesting it.

"With very kind personal regards, I am"—

To which Dr. West replied on March 18, 1936, Exhibit 143:

"My dear Doctor Frieburg:

"I am greatly obliged to you for your personal letter of March 14. I am glad indeed to have the information submitted. I sincerely hope, of course, that the Cincinnati Academy of Medicine will be able to head off the establishment of all sorts of group schemes of the nature referred to in your letter, because I am quite convinced that these schemes do not operate to the advantage of medicine or the medical profession or of the public. I do believe that they are opposed to public policy. While I have frequently heard that the clinic mentioned in the first paragraph of your letter, which has been operating in Los Angeles for some time, has heretofore been rendering good medical service, I have heard it intimated within the last week that the quality of the service rendered by that concern is gradually deteriorating. As far as I am personally concerned, I am quite convinced that this is an inevitable result of the operation of such schemes.

"If I secure any further information from authentic sources I shall pass it on to you.

"With most cordial good wishes I am

"Very truly yours."

By Mr. Leahy:

Q.—Doctor, when you wrote that you "have heard it intimated within the last week that the quality of the service rendered by that concern is gradually deteriorating," were you or were you not expressing the information that you had at the time truthfully and correctly? *A.*—I was; yes. I might say, if it is permissible, that I had other communications from Dr. Frieburg by telephone and by personal visit that presented information that was not contained in his letter.

Q.—Do you recall, with reference to the writing of the letter to Dr. Frieburg, when it was you received information that the quality of medical care which the Ross-Loos clinic was giving was beginning to deteriorate? *A.*—It was within a week of the time that letter was written, whatever that date is. But I will, in order to be perfectly fair to everybody concerned, be glad to state openly here that I later heard from quite as reliable sources that the Ross-Loos clinic was continuing to render good medical service. I have no intention or desire to be unjust to anybody and I do not want to do anybody any harm, and I would be glad to make amends for any statement, even though I considered it to be reliable and authentic, that was later refuted by another statement from equally reliable and authentic sources.

Q.—Doctor, there is a rather long exhibit here which I am not going to bother to read, but I do want to ask you if you will look at Exhibit 104, and I will ask you if you received that letter, Exhibit 104, and the exhibit attached thereto? *A.*—Yes, sir; I did.

Q.—Do you recall the occasion for the receipt of the letter, if there was any, so far as you were concerned? *A.*—I cannot definitely recall the circumstances involved in this matter, Mr. Leahy.

Q.—All right. *A.*—I can give you my best recollection, if that will serve.

Q.—What is your best recollection, Doctor? *A.*—My best recollection is that Mr. Hendricks, the gentleman who wrote this letter, had heard something of these plans and had talked to me either over the telephone or in a personal visit, about the plans referred to in that statement.

Q.—Who was this Mr. Hendricks? *A.*—Mr. Thomas A. Hendricks, the executive secretary of the Indiana State Medical Association.

Q.—Is he a personal friend of yours? *A.*—I have known him ever since he has been connected with the Indiana State Medical Association, which I should say has now been some twelve or fifteen years.

Mr. Leahy:—Ladies and gentlemen, this is a letter dated June 22, 1937, on the official stationery of the Indiana State Medical Association, in which Thomas A. Hendricks, Executive Secretary, says to Dr. West:

"We enclose a copy of the confidential report which gives details of the plan for a cooperative medical service in Washington for Federal employees."

The enclosure is a rather long one, marked "Confidential. For Private Circulation Only," and entitled "A Plan for a Cooperative Medical Service on a Periodic Payment Basis for Federal Employees and Their Families in Washington." I shall not take the time to read that exhibit, because it is a bit lengthy.

By Mr. Leahy:

Q.—I am going to show you, Doctor, however, Exhibit 103, dated June 23, 1937, and ask you if you can identify that? *A.*—Yes, sir; I can.

Q.—Is the Mr. Thomas A. Hendricks to whom you addressed this letter the same Mr. Thomas A. Hendricks you just spoke about? *A.*—Yes, sir.

Mr. Leahy:—The letter is dated June 23, 1937:

"I am very greatly obliged to you for your letter of June 22, for the memorandum attached to it, and for the copy of a plan for a cooperative medical service on a periodic payment basis for Federal employees and their families in Washington.

"While we already had a copy of this plan and practically all of the information submitted in the memorandum attached to your letter, we are nevertheless grateful to you for sending us the material that accompanied your letter, and especially for the information pertaining to the small group in Washington that seems to be acting as a steering committee for the organization of cooperative medical services among various governmental departments. We had not been able to secure this particular piece of information. We had information for two or three months that a movement has been started to organize medical service plans for government employees. We have made very diligent efforts to ascertain all the facts, and we are still persisting in those efforts.

"Since the Atlantic City session Dr. Woodward has been in Washington for a large part of the time and has had interviews with officials of the H. O. L. C., the Resettlement Administration, the Brookings Institute, and numerous others. The one thing we have tried very hard to secure is a copy of the contract to be entered into between the cooperatives and their members. Our own efforts as well as the efforts of persons in high official positions in Washington have been altogether unavailing, and we have not been able to secure a copy of the contract or any specific information about its provisions. If you can succeed in securing any additional information we shall appreciate it if you will pass it on to us, just as we have fully appreciated your helpfulness in connection with other matters in the past.

"Very sincerely yours."

By Mr. Leahy:

Q.—Doctor, when you mentioned in your letter that you had made "efforts as well as the efforts of persons in high official positions in Washington," to whom were you referring? *A.*—I think I referred at that time to Senator Copeland and to Mr. Rayburn who, I believe, is now Speaker of the House of Representatives, and possibly to Senator Connally of Texas. I should like to say that I had no personal contact in this matter with either Mr. Rayburn or Senator Connally, but the chairman of the committee of the American Medical Association had communicated with them and had sought their help in securing a copy of the contract. I did visit personally Senator Copeland on two occasions, and I think there are letters in the files now in possession of the Government—I do not know whether they have been presented here in this trial or not—from Senator Copeland to me and perhaps one or two that I may have written him.

Q.—I think you mentioned the chairman of the committee. Who was he? *A.*—Dr. E. H. Carey of Dallas, Texas.

Q.—Of what committee was he the chairman? *A.*—He had been president of the American Medical Association, and at that particular time was chairman of the Committee on Legislative Activities.

Q.—Doctor, I want to show you Exhibit 106, which is a letter from Dr. William P. Herbst addressed to you, and ask you if that came to your attention? *A.*—Yes, sir.

Q.—Do you recall whether you wrote any reply to that letter? *A.*—I do not recall. I think it is quite possible that I did, because I try to reply to every letter I receive or that for any reason at all needs to be replied to.

Q.—I am going to show you Exhibit 105 and ask you if you can identify the carbon copy as being a carbon copy of the original which you wrote? *A.*—Yes, sir. I think I wrote that letter.

Mr. Leahy:—Exhibit 106, the letter which has been identified as from Dr. Herbst to Dr. West—omitting a paragraph which has nothing to do with the matter in hand, and reading only so much thereof as refers to this matter, to the effect that Group Health Association of the Home Owners Loan Corporation

"has already been incorporated, and our Executive Committee had a meeting with some of their representatives last night and it certainly looks bad.

"It was brought out that it is possible for them to borrow money from the Home Owners Loan Corporation when and if necessary at any time for any purpose. It was also brought out that there were about two hundred branches scattered throughout the United States which maintain emergency rooms with nurses, which are directly under the central office here in Washington. Just what is going to come out of the whole affair it is impossible to predict at this time, but there are going to be some conferences and attempts to go along with this outfit if it is possible to do so and retain our faces.

"I am on my way up to the A. M. A. in Minneapolis, and if I can steal any time on my way up or on my way back I will give you a call. I trust it will be possible to have a little visit with you."

To which Dr. West replied on June 28, 1937:

"I am greatly obliged to you for your letter of June 25. We have been considerably perturbed over the scheme that is being promoted under the auspices of the Home Owners Loan Corporation and have made very earnest efforts to develop dependable information through authentic sources. While we have secured some very interesting information, we have not been able to secure other information of an absolutely essential character. The way in which this matter has been promoted in Washington is rather typical. We are grateful indeed to you for the information offered in your letter. I shall hope to see you when you are in Chicago.

"With most cordial good wishes, I am"—

By Mr. Leahy:

Q.—Do you recall, Doctor, whether Dr. Herbst dropped off on his way to Minneapolis or from Minneapolis back to Washington, to see you? *A.*—I do not.

Q.—I now show you Exhibit 177 which purports to be a memorandum from Dr. Woodward, and I ask you if you have any recollection of having received that memorandum? *A.*—I do not have any independent recollection of it, Mr. Leahy, but I think it is quite probable that I did receive it and that I read it.

Q.—Is there anything on the memorandum itself to indicate that you did see it? *A.*—Yes, I should say so.

Q.—To what do you refer when you say there is something there which would indicate that you had seen it? *A.*—I think I recall having read the last two paragraphs of the communication.

Q.—Is there anything on the memorandum which shows it was in your file, Doctor? *A.*—I do not see anything that shows it was in my file.

Mr. Leahy:—This is a memorandum which is dated on the 28th day of June 1937. It is a memorandum which I think I read to the jury in Dr. Woodward's testimony. It is Exhibit 177. The two paragraphs which Dr. West has identified—am I right?—are the two last paragraphs. *A.*—Yes.

Mr. Lewin:—Did I understand the witness to say he had only read those last two paragraphs?

Mr. Leahy:—He says he has a recollection of having seen those last two paragraphs.

The Witness:—I said, if I may be permitted, that after reading the last two paragraphs I thought I could say that I had received the memorandum. I could identify it because of the last two paragraphs that I remembered.

Mr. Leahy:

"About 4 o'clock p. m., June 28, I talked with Dr. J. Russell Verbrycke Jr., Washington, D. C., relative to certain statements in a letter just received by Dr. West from Dr. William P. Herbst of Washington, concerning the Group Health Association, Inc., organized in Washington under the auspices of the H. O. L. C."

By Mr. Leahy:

Q.—Stopping at that point, Doctor, can you tell us, having heard read just now the opening sentence of this memorandum of Dr. Woodward's, whether or not you drew to Dr. Woodward's attention Exhibit 106, which is the Herbst letter which was just read? *A.*—I would say that I probably did, but I do not see anything here that would definitely indicate that I did. I would be quite willing to say that in all probability I may have done so.

Mr. Leahy:

"I suggested to Dr. Verbrycke that I could not see how they could go along with the association named without violating the principles of medical ethics of the American Medical Association. His answer was in effect that they would try to work out some plan whereby they could do so. Cooperatives, he said, were already with us, and the representatives of the Medical Society of the District of Columbia thought it would be better for that Society to help organize cooperatives on an ethical basis rather than oppose the wishes of the Association named. I asked what cooperatives he knew of, and he named the Group Health Association, Inc. I called his attention to the fact that the organization was an illegal corporation, if there could be such a thing, in that it was incorporated to engage in the practice of medicine and dentistry. Dr. Verbrycke said that representatives of the association had said that it was not planning to engage in such practice. I told him that its charter definitely planned that it should do so. He said that representatives of the association had refused to furnish him with a copy of its articles of incorporation, and he was much surprised when I told him that those articles were matters of public record and that I had a copy of them. I asked what Dr. Herbst meant when he said that there were already two hundred emergency rooms with nurses in attendance under the direction of the central office in Washington, whether he meant that those two hundred emergency rooms were under the Washington headquarters of the office of the association organized under the auspices of the H. O. L. C. He said that reference had not been made to the present existence of two hundred such emergency rooms under the association, but ultimately the association expected to have that number of rooms throughout the country. Dr. Verbrycke said he had prepared a lengthy report on the situation, which report had been approved by a subcommittee and then by the full Executive Committee of the Medical Society. He promised to send a copy of that report and try to get it off by airmail special delivery tonight. He said, too, that minutes had been kept of the recent conference with representatives of the Association and that he would send me a copy of those minutes. Dr. Verbrycke said that a Mr. Penniman had stated that they had the same right to look after the health of their employees that any private corporation had to look after the health of its employees. I suggested that in my judgment the representatives of the corporation had done some tall bluffing, but he felt confident that that would not be the case because Mr. Penniman is a high official in the H. O. L. C. and a smart man. I suggested that that very type would do the bluffing."

The Court:—That last letter falls exactly into the category that I mentioned to you a while ago. That was read in full when you examined Dr. Woodward.

Mr. Leahy:—That is what I thought, but I was not sure. My own recollection was—

The Court:—Yes. You both did.

(Here the witness identified the minutes of the meeting of the Board of Trustees, June 29, 1937.)

By Mr. Leahy:

Q.—Doctor, do you recall the occasion of the telephone conversation between you and Dr. Verbrycke, how it came about? *A.*—I have no recollection of how it came about, except that Dr. Verbrycke, as I recall it, called me over the long distance telephone.

Mr. Leahy:

"Since the meeting held at the Metropolitan Club in Washington the other evening I have given a little more thought to the matters that were discussed and have come to the conclusion that I offered one suggestion for the consideration of the Medical Society of the District of Columbia that it was not altogether wise to offer."

By Mr. Leahy:

Q.—In view of the statement just read, can you now tell us whether or not the meeting at the Metropolitan Club in Washington was in June or July 1937? *A.*—I think it must have been in the early part of June, or possibly at the very last of May; but I suspect from the date of this letter that it was in the early part of June.

The Court:—I think that letter was read also.

Mr. Leahy:—Was it read also?

The Court:—I am quite sure it was. If there is any particular thing in connection with it that refers to Dr. West I think you might refer to that particular part of it.

By Mr. Leahy:

Q.—Just referring to the second paragraph, Doctor:

"First, I do not believe that the District Society could organize any sort of cooperative scheme without establishing a relatively low income limit for those who might be included among the beneficiaries of the scheme. It is my understanding that the so-called H. O. L. C. cooperative does not intend to establish any particular income limit, but that the higher paid officers among the employees of the corporation are to be included in the cooperative scheme. Certainly the District Society could not afford to undertake any sort of plan under which persons enjoying relatively large incomes would be included.

"Secondly, if the Medical Society of the District of Columbia should attempt to organize and operate a cooperative movement it would at once give endorsement to the principle of collective bargaining which, in my opinion, cannot properly be applied to medical service."

Q.—What did you mean, Doctor, by that last sentence, more particularly that "the principle of collective bargaining cannot be properly applied to medical service"? *A.*—I would like to say, if I may, that in that meeting at the Metropolitan Club, I think the only suggestion that I advanced was that the Medical Society of the District of Columbia might well give further thought to the development of a medical service plan under its own auspices. I wrote to Dr. Verbrycke and told him that I thought perhaps it may have been unwise for me to offer that suggestion and that I wished to withdraw it. I had three reasons, two of which are expressed in that letter, and the other was that I did not want it to appear—

Mr. Kelleher:—I do not think that is responsive to the question. The question is, what did he mean by collective bargaining in that letter?

By Mr. Leahy:

Q.—Tell us what you meant by collective bargaining. *A.*—As a matter of fact, I stand behind that letter, because it is there in black and white, but I doubt very much having used the term "collective bargaining," because I cannot recall that I ever did use it. I think what I had in mind was mass production methods in medical service. But I stand behind the letter, because it is there.

Q.—Is that mass production in the practice of medicine the same as you have already explained? *A.*—Yes. I do not know that I have explained it, but it simply means to try to handle patients en masse.

The Court:—I think you explained that.

By Mr. Leahy:

Q.—You stated also that you had another reason for withdrawing the suggestion you had made at the Metropolitan Club. What was the other reason, Doctor? *A.*—The reason was, as I understood it, the basis of a plan that had been organized or was to be organized which was known as Group Health Association and is now known as Group Health Association, with fees that were too low to make it possible to provide good medical service by any group; and certainly I did not think that the Medical Society of the District of Columbia could develop and operate a medical service plan of its own with all of its

members, or as many as were willing to be connected with it, that would establish a fee for service lower than that established by the Group Health Association or any other group of a similar nature.

Q.—Who was Mr. Wright? *A.*—Dr. Charles B. Wright, at the time this letter was written and for some years prior to that time, was a member of the board of trustees of the American Medical Association.

Mr. Leahy:—There are several paragraphs in this letter entirely unrelated to the present matter and dealing with other matters, and I will omit taking time to read those, and will read only so much as refers to the matter in hand:

"I had a long conference with the committee of the Medical Society of the District of Columbia about the cooperative movement that is being promoted by groups of Government employees. The District Society is apparently very much agitated about this matter and, as a matter of fact, there was very little that I could offer them in the way of suggesions as to what they might or should do. In accordance with the authorization given by the board of trustees I have asked Dr. Woodward and Dr. Leland to go to Washington for the purpose of conferring with the Medical Society of the District of Columbia and they are to have a conference with official representatives of the Society in Washington today.

"There seems to be a lack of authentic information concerning the exact nature of the cooperative movement. A man in high official position in the H. O. L. C. was quoted in Washington as having specifically stated that the H. O. L. C. is not to finance the cooperative movement."

By Mr. Leahy:

Q.—Do you know who that high official was, Doctor? *A.*—I cannot recall.

Mr. Leahy:

"Information from other sources, however, is exactly to the contrary. Nobody has as yet been able to get a copy of the contract that may exist between the cooperative organization and the Home Owners Loan Corporation, nor has any one been able to get a copy of the contract that will be entered into between the cooperative and those who purchase this contract.

"I was told that two thousand or more Government employees have already signed up as members of the cooperative in certain departments, and a few minutes later I was told by a Washington physician that employees in certain departments had refused to have anything whatever to do with the movement. It seems almost impossible to get information in Washington that you can tie to. I have never in all my life seen such a situation as now exists. I think Dr. Woodward has about come to the conclusion that the only way to fight the cooperative movement among Government employees is to wait until the facts can be definitely discovered and then resort to court procedures in an effort to have the cooperative declared a corporation engaged in the practice of medicine.

"I have not yet come to any definite conclusion in my own mind as to whether or not this would be a wise procedure."

Then follow several other paragraphs which have nothing whatsoever to do with Group Health, and I will omit the reading thereof.

By Mr. Leahy:

Q.—I am now showing you Exhibit No. 200, offered by the Government, dated July 16, 1937, and will ask you whether or not that came to your attention. *A.*—I think it did, sir.

Mr. Leahy:—That I am not going to take the time to read, because I am quite sure that that was read in connection with the testimony of Dr. Woodward or Dr. Leland, and I am going to identify it to the jury merely as the "Memorandum to Dr. West from Dr. Woodward and Dr. Leland, Subject, Group Health Association, Inc., apparently an affiliate of the Home Owners Loan Corporation." Its date is July 16, 1937, and it relates, does it not, Doctor, to the visit which Dr. Leland and Dr. Woodward paid to the District Medical Society in the District of Columbia on July 14?

The Witness:—I do not believe it is, Mr. Leahy. I think it is another memorandum.

Mr. Leahy:—Do you recall whether I read this at one time to the jury in connection with Dr. Woodward's testimony?

THE COURT. It was read in connection with Dr. Leland's testimony, either this morning or yesterday afternoon.

Mr. Lewin:—I read a portion of it this morning, with Dr. Leland on the stand.

Mr. Leahy:—I will not read it again.

The Witness:—I do not believe that is the report that was prepared.

By Mr. Leahy:

Q.—That is not, then, the report of the conference which was had in Washington by Dr. Woodward and Dr. Leland? *A.*—With the District Medical Association?

Q.—Yes. *A.*—I don't think it is.

Mr. Lewin:—What is the date of it?

Mr. Leahy:—July 16, 1937.

Mr. Lewin:—That was two days after the conference.

Mr. Leahy:—Yes. I will pass on to something else. It seems to me that I have a recollection of that having been read.

THE COURT:—It was read this morning, I am sure.

By Mr. Leahy:

Q.—Doctor, I want to ask you whether or not Exhibit No. 294 came to your attention? *A.*—I assume that is a copy of the statement prepared by Dr. Woodward which came to my attention. It is such a long thing that I cannot be sure that every word of it is just what I saw, but it seems to be a carbon copy. I think it is.

Q.—That is a carbon copy, is it, of what later appeared as an article on Oct 2, 1937, appearing in THE JOURNAL? *A.*—Yes; but I don't know that it is exactly the same as that which appeared in THE JOURNAL, because there were some changes made.

Q.—But it appears to be one that at some time came to your attention? *A.*—I think so; yes.

Q.—We will not take the time to read that over. I show you another, which is Government Exhibit No. 293, THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION for Oct. 2, 1937. Is that the article to which you referred earlier in your testimony as having been prepared by Dr. Woodward and later published? *A.*—Yes.

Mr. Leahy:—This is Exhibit 154, dated Oct. 7, 1937, directed to Dr. C. B. Conklin, Washington, D. C., Secretary, Medical Society of the District of Columbia:

"Dear Dr. Conklin:

"I am grateful indeed to you for your kindness in sending me a copy of the resolutions to be presented by the Executive Committee of the Medical Society of the District of Columbia and to be considered, as I understand it, at a meeting of that society to be held tonight.

"I confess that I feel somewhat concerned over the possibility of adoption of these resolutions by the District Society, because I am somewhat afraid that if they are adopted the promoters of Group Health Association, Inc. will be greatly encouraged and may be stimulated to exert efforts to extend these efforts beyond the scope that I understand they originally intended.

"I also entertain some fear that if the resolution is adopted as it now stands, the proponents of compulsory sickness insurance who are now devoting their efforts to the establishment of all sorts of voluntary insurance schemes, knowing full well that voluntary insurance has always been the forerunner of compulsory insurance, will redouble their efforts to bring about the establishment of all sorts of plans for group prepaid medical service. I fear that even the slightest implication of approval of the activities of incorporated groups may result in stimulating the organization of similar groups elsewhere than in the District of Columbia, and possibly give considerable impulse to the development of corporation practice.

"You know very well, of course, that I have no disposition whatever to intrude in the affairs of the Medical Society of the District of Columbia, and I hope that neither you nor anybody else will feel that this letter is intended to be even in the least degree in the nature of such intrusion.

"With my sincere good wishes, I am

"Very truly yours."

By Mr. Leahy:

Q.—Returning, Doctor, for a question on Exhibit 154, copy of letter dated Oct. 7, 1937, will you kindly explain your fear with reference to compulsory sickness insurance? *A.*—Well, about the time that letter was written there was a very determined effort being made to promote movements designed to bring about the establishment of systems of compulsory sickness insurance in some of the states, and the proposal had been made that such a system should be organized under the auspices of the Federal Government. It is true that in many of the instances where compulsory sickness insurance plans have been put into effect the forerunners of those plans were voluntary sickness insurance plans. The American Medical Association has made most exhaustive and careful study of the workings of compulsory sickness insurance plans or systems in several countries, and is convinced beyond any doubt whatever that they do not contribute to the advancement of scientific medicine and that they do not serve the best interests of the public. The association believes and its House of Delegates has repeatedly expressed its opinion and established its policy, that a system of compulsory sickness insurance in the United States on a Federal basis would be destructive of all the best values and elements—

THE COURT:—Pardon me, Doctor. I think you have gone too far into this. That is not one of the issues in this case. Are you going to try out sickness insurance matters?

Mr. Leahy:—The reference was in there.

THE COURT:—The reference in the letter does not make it a matter for detailed testimony.

Mr. Leahy:—I am not going any further on the testimony than that. That was the only question that I was going to put on it.

Mr. Kelleher:—May we move to have that stricken, your Honor?

THE COURT:—I think it should go out, because if it does not, what is the result? We will spend half an hour in cross examination on it.

Mr. Leahy:—What he has stated there, that the American Medical Association had made careful study of the compulsory insurance idea and did not believe that it was in accordance with the public interest, and that is what he meant when he wrote what he did to Dr. Conklin—

THE COURT:—I think that appears from the letter. You are just opening up an issue for cross examination.

Mr. Leahy:—No; I am not going any further on it at all, if your Honor please.

THE COURT:—I think it is better to strike it out.

Mr. Leahy:—Then may I move to strike the letter?

THE COURT:—The whole letter? You can withdraw it.

Mr. Leahy:—They have offered the letter.

Mr. Lewin:—We wanted it for certain parts of it.

Mr. Leahy:—There are no "certain parts." The letter goes in or out.

Mr. Lewin:—We offered the letter for certain statements in it that we thought were relevant to the case. We did not think we could offer the letter piecemeal, and that is why the whole thing was offered. We are perfectly willing to have the immaterial portions stricken.

THE COURT:—I think Dr. West's statement—I do not mean to cut out every reference to it—may stand to the extent that that was a matter that had been under consideration by the American Medical Association and which they were opposed to. But it is the extensive explanation of these things that is likely to draw a lot of cross examination on collateral matters.

Mr. Leahy:—May I show this letter to your Honor?

THE COURT:—I think I will let it stand and let Dr. West's testimony stand, so far as I have indicated, for that purpose only.

Mr. Leahy:—That is the only purpose. I did not mean to introduce anything else. The last thing I want to do is to get into an argument about compulsory insurance.

Mr. Kelleher:—Your Honor, I want to be clear about how far Dr. West's statement is in.

THE COURT:—Simply to the point that it was a subject which had been under investigation by the Association.

Mr. Leahy:—I do not want to be captious, if your Honor please, but does it mean also so much of the statement that after the investigation the American Medical Association found it was not in accordance with the public interest, in their judgment?

Mr. Lewin:—I think that should be stricken. What difference does it make what they found out about compulsory insurance?

THE COURT:—He stated that. You might just as well try to put the sunlight out of the room here. It probably would have been better if I had not said anything about it, but I thought it might develop some collateral question. Let the whole thing stand as it is.

Mr. Leahy:—Exhibit No. 111 has been identified by the witness, dated October 9, as a letter which he received from Dr. Conklin. I think that letter has been read before, and I am not going to take the time of the jury to read it again. It is a letter from Dr. Conklin in which he encloses a copy of a resolution, or, rather, quotes a resolution that the Medical Society of the District of Columbia passed, and caused a copy of the report of the Bureau of Legal Medicine and Legislation to be sent to each of its members.

THE COURT:—That has been read.

Mr. Leahy:—I think it has been read before.

By Mr. Leahy:

Q.—That acknowledges, does it not, Doctor, the receipt of Dr. Conklin's letter of October 9, which is Exhibit No. 111? *A.*—Yes, sir.

Mr. Leahy:

"I am greatly obliged to you for your letter of October 9 in which you present the resolution adopted by the Medical Society of the District of Columbia at the meeting of October 6. I am of course greatly pleased at the decision of the Society. I am looking forward with pleasure to seeing you here at the annual conference of secretaries of constituent state medical associations on November 19 and 20."

By Mr. Leahy:

Q.—Doctor, what is the annual conference of Secretaries of constituent state medical societies? *A.*—It is a conference which is held at the office of the American Medical Association each year unless there is some special reason for postponing the conference for one year, to which the Secretaries of all constituent state associations are invited along with the editors of all state medical journals and the officers of constituent state medical associations.

Q.—Now, what is the purpose of the conference? *A.*—The purpose of the conference is to give the secretaries and editors of the various state associations an opportunity to become acquainted with the actions of the American Medical Association; to confer among themselves, and with the official representatives of the Association, including the heads of departments and the members of the Board of Trustees as to matters of common interest relative to the organization sources and the work of the state organizations in relation to the work of the American Medical Association, or their relation to other medical organizations.

Mr. Leahy:—Exhibit 108 is a letter from Dr. Conklin to Dr. Fishbein:

"Dear Dr. Fishbein:

"The Medical Society of the District of Columbia desires 1,000 reprints of the article which appears in the Oct. 2, 1937, issue of THE JOURNAL, Organization Section, pp. 39B-46B, entitled 'Group Health Association, Incorporated,' for distribution to its members. We should appreciate your informing us of the cost and of the earliest probable time for delivery.

"Thanking you, I am

"Very truly yours."

The reply written by Dr. West is dated Oct. 19, 1937, addressed to Dr. Conklin. It is Exhibit 109.

"We shall send you at once printed copies of the article that appeared in THE JOURNAL of October 2 entitled 'Group Health Association, Incorporated.'

"I am not definitely sure that we can send as many as 1,000 copies but if they are available the full number will go forward as soon as possible and any deficiencies will be made up later.

"Very sincerely yours,"

By Mr. Leahy:

Q.—Who is Dr. Tibbals? *A.*—He is not Doctor; he is Mr. Tibbals, and he is the secretary of the Utah State Medical Association.

Q.—Is he a personal friend of yours? *A.*—I have only known him for a year or two.

Q.—Did you have any other occasion than that indicated in the first part of your letter, "I have before me your letter of October 26," for writing this letter? *A.*—None that I can recall. I know of no reason why I should have written him otherwise.

Mr. Leahy:

"The American Medical Association has very actively opposed the plans of Group Health Association, Incorporated, as has the Medical Society of the District of Columbia, but, in spite of all the efforts that have been put forth, I have within the last thirty minutes received information from Washington to the effect that the Group Health Association, Incorporated, has announced the names of its medical staff and that the Home Loan Bank Board has agreed to provide $20,000 a year for two years to finance that association. If you will be good enough to examine THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION for October 2, you will find an article dealing with this matter.

"We have taken the position that since the practice of medicine by corporations has been declared to be illegal by many states, no agency of the federal government is justified in using federal funds to finance a corporation that intends to engage in the practice of medicine. I understand that some of the promoters of Group Health Association, Incorporated, have taken the position that since licensed physicians are to be employed who will provide medical service for the members of that corporation, the corporation can not be considered as practicing medicine. That contention has, of course, no merit whatever.

"I regret exceedingly that because of a number of meetings of various kinds that have been held here within the last two or three weeks, which has resulted in most of my time being taken up in attending these meetings and in important conferences, I unavoidably got far behind with correspondence and thus is explained my failure to make prompt reply to your first letter.

"I am glad indeed to know that Doctor Edmunds intends to be present at the Secretaries' Conference and I hope that we shall also have the pleasure of having you with us on that occasion."

By Mr. Leahy:

Q.—Doctor, when you made the statement:

"The American Medical Association has very actively opposed the plans of Group Health Association, Incorporated,"

to what did you refer as the opposition contained therein? *A.*—Our efforts to develop all the facts that could be had in order that they might be published for the information of the profession; the various medical organs of the country, and who else might be interested.

Q.—What other form of opposition up to that time had been instituted in regard to anything connected with Group Health Association? *A.*—Nothing other than was incidental to efforts to collect the facts for the purposes indicated.

Q.—Have you any independent recollection now of what inquiry was made by Mr. Tibbals, which elicited the answer which you just made? *A.*—I couldn't recall; I couldn't give you a definite answer to that question.

Mr. Leahy:

"I have just been informed that the Group Health Association has announced the names of the members of its professional staff, as follows: Dr. Brown; Dr. Raymond E. Selders; Dr. Allan E. Lee; Dr. Edmond D. Wells; Dr. R. Stephen Hulbert, and Dr. M. Scandiffio. Our records indicate that only two of these men are members of the American Medical Association, namely, Drs. Allan Edward Lee and Mario Victor Scandiffio. Both of these men have been reported as members in good standing in the Medical Society of the District of Columbia and Dr. Scandiffio has qualified as a Fellow of the American Medical Association.

"I am informed that the Home Loan Bank Board has agreed to provide $20,000 a year for two years for the use of the Group Health Association.

"All of this makes it appear that both the Group Health Association and the Home Loan Bank Board have definitely determined to proceed with their plans in spite of all protests that have been lodged against such procedure.

"Very sincerely yours."

By Mr. Leahy:

Q.—Doctor, from your examination of this exhibit has your recollection been refreshed to the degree that you can now state what was the source of the information which you stated you had just received? *A.*—My recollection is that that information came to us through a telegram received in the office from Mr. John S. Hayes, who was for some years the representative of THE JOURNAL in Washington.

Q.—And without taking the time to read these, because I am sure they have been read before—do I identify them correctly as being telegrams following which the conference of November 6 was held in Chicago between you and Dr. Hooe and Dr. McGovern; Dr. Leland and Dr. Woodward? *A.*—Yes.

Q.—Have you any independent recollection now of what the original of the letter was which you received from Mr. Tibbals, to which this Exhibit 113 is a reply? *A.*—My recollection is that he wrote a letter to me asking for information about the matter referred to herein, and I had this additional information which I had not included in a letter written to him several days previously, which I then passed on to him in this letter.

Mr. Leahy:

"I am very glad indeed to have your letter of November 4."

"Since I wrote you last, the Group Health Association, Inc., has begun operations. The Home Loan Bank Board has agreed to finance the movement by providing $20,000 a year from its funds for two years. The names of the medical staff, composed of six or seven men, have been announced. Only two are members of any component county medical society or any constituent state medical association. The American Medical Association and the Medical Society of the District of Columbia have opposed the movement to the fullest possible extent but without success.

"Under the circumstances, we shall take care of the necessary travel expense incurred by you in attending the Annual Conference of Secretaries of Constituent State Medical Associations."

Mr. Leahy:—I ask you this: that statement was not made in any way in connection with Group Health?

The Witness:—No, not in the world.

By Mr. Leahy:

Q.—I now show you Exhibit 117, which purports to be a résumé of a conference which was held November 6. See if you identify that as such, because we have read that and referred to it again and again.

THE COURT:—Is that the conference of the Hooe committee?

Mr. Leahy:—Yes.

The Witness:—I recognize that as an excerpt or abstract, whichever you want to call it—of what occurred at the time. I don't identify it as a verbatim statement of it.

Mr. Leahy:—I am not going to take the time to read that; we have read a photostatic copy of it before.

By Mr. Leahy:

Q.—Doctor, have you read over this abstract of what occurred at the meeting of November 6 in Chicago, so that you can now state that the abstract correctly reports what was said by you?

THE COURT:—Indicate to the doctor the part that you wish to refer to.

The Witness:—Well, as I recall this, I heard a statement when it was read, a statement attributed to me to the effect that I considered a certain proposition as a reasonable propostion.

By Mr. Leahy:

Q.—On page 7, I direct your attention to the statement made by Dr. Hooe, and the statement made by Dr. West. Did you hear those statements read as from that abstract, Doctor? *A.*—I think I heard it read here.

Q.—Does that abstract correctly report what you said on that occasion? *A.*—No, it doesn't.

THE COURT:—You may take the opportunity of reading that part of it.

The Witness:—I don't know whether it is a matter of great importance; it does support my statement that it is not a verbatim report. It says:

"Dr. Hooe: Is it not, in your opinion, most reasonable that the hospitals should acquiesce in this matter?

"Dr. West: It is reasonable that they should do it, but as to whether or not they will, that's another question. Suppose they don't?"

Now, I am quite sure that I did not express a definite opinion as to whether it was reasonable, but I raised the question as to whether it would do any good to attempt what was proposed. As a matter of fact, I believed the hospitals should control their own affairs.

MARCH 20—MORNING

TESTIMONY OF DR. OLIN WEST

DIRECT EXAMINATION (RESUMED)

By Mr. Leahy:

Q.—Who was Dr. Knopf? *A.*—He was an old and distinguished physician who resided in New York City, who had taken special interest in general medical affairs and was especially interested scientifically in tuberculosis.

Q.—I notice that in your letter you begin "I am greatly pleased to have your letter of November 3." Do you recall whether there was any other occasion to write to Dr. Knopf than his letter which he sent to you? *A.*—None in the world, so far as I can recall, sir.

Mr. Leahy:—Exhibit 161 is dated Nov. 8, 1937 and addressed to Dr. Knopf:

"I am greatly pleased to have your letter of November 3 to which is attached a copy of a letter addressed by you to Mr. Robert L. Hill, a charter member of Group Health Association, Inc., in Washington. I am of course greatly pleased that you approve the official attitude of the American Medical Association toward such movements as the Group Health Association, Inc. When one considers the facts with respect to the number of Government employees in Washington and in one or two other centers in the United States, one is compelled to wonder what will become of the private practice of medicine in those centers if the Government is to subsidize cut-rate medical schemes under which corporations are to engage in the practice of medicine, in spite of the fact that the practice of medicine by corporations has been repeatedly declared to be illegal in one state after another. Even in the city of Washington at least one opinion has been submitted by a duly appointed public official clearly indicating a definite view to the effect that such decisions as have been handed down by a number of courts in various parts of the United States to the effect that practice of medicine by corporations is illegal are in accord with the law. In so far as I know, no public legal authority in Washington has definitely expressed an official opinion concerning the legality or illegality of the practice of medicine by a corporation, but I am specifically informed that the principle involved has been fully covered in a legal opinion uttered by an official of the Government of the District of Columbia or an official of the Federal Government in Washington. However all this may be, it is nevertheless a fact that the Group Health Association, Inc., has begun operations and that under the provisions of its by-laws and of its charter Government officials who are paid such salaries as to remove them entirely from the category of the low income group are in position to receive medical service to be provided for them on a cut-rate basis by a corporation engaged in the practice of medicine and actually subsidized by an official agency of the Federal Government.

"I am grateful indeed to you for your kindness in sending me a copy of your little book, 'Child Labor and the Nation's Health.' I appreciate this thoughtful gift all the more because it is an autographed copy, and I am grateful to you for the kindly sentiment expressed in the inscription which you were good enough to make.

"With assurances of my sincere respect and esteem and with my very best wishes for your health and happiness, I am

"Very truly yours."

By Mr. Leahy:

Mr. Leahy:—It is dated Nov. 9, 1937, addressed to Dr. Robert A. Hooe, 1746 K Street N.W., Washington, D. C.:

"My Dear Dr. Hooe:

"I am sending you herewith by air mail special delivery two copies of an abstract of the notes taken at the conference held in my office on last Saturday. I am also sending you a copy of this abstract by registered mail.

"We were greatly pleased to have a visit from you and Dr. McGovern, and I hope that matters will be satisfactorily adjusted."

By Mr. Leahy:

Q.—Doctor, do you recall to what abstract you were referring when you said you were sending two copies of an abstract of notes taken at a conference? *A.*—Yes, sir. That was an abstract prepared by a stenographer in my office of the conversations that took place at a conference attended by Dr. Hooe and Dr. McGovern of Washington, and Dr. Woodward, Dr. Leland and myself.

Q.—Was that the abstract which you identified yesterday, of the November 6 conference? *A.*—Yes, sir.

The witness identified exhibits relating to the correspondence with Dr. Joseph S. Wall covering Dr. Richard Cabot's address in Washington.

By Mr. Leahy:

Q.—Doctor, referring to the letter which I have just read, you stated that a report on this matter was submitted to the Board of Trustees at Atlantic City. Is that the same report which you told us yesterday about, when the matter of Group Health was reported to the Board of Trustees and the House of Delegates at Atlantic City? *A.*—I think it is, Mr. Leahy. However, the minutes of the Board of Trustees that were shown to me yesterday were not dated, and I am not clear whether that particular report was submitted to the Board of Trustees at Atlantic City or whether it was done at the September meeting of the Board. I think I stated yesterday that my recollection was that it had been submitted to the Board of Trustees at its meeting in September. This letter would seem to indicate that it had been done at the time of the Atlantic City session.

Q.—You stated, further, that instructions issued by the Board of Trustees at that time had been carried out as fully as possible. Do you recall now just what the instructions were, in substance? *A.*—The instructions, as I recall, and if I have the correct matter in mind—

Mr. Lewin:—Would you find out whether the instructions were in writing?

By Mr. Leahy:

Q.—Do you recall, Doctor, whether the instructions were in writing? *A.*—They were, according to my recollection, in the minutes of the Board of Trustees.

Mr. Lewin:—I would like to object, then.

By Mr. Leahy:

Q.—What is your best recollection? We will get those minutes out and see if they refresh your recollection, because we did not read them yesterday. *A.*—My best recollection, as a matter of fact, until this letter was read, was that the action was taken by the Board of Trustees at the September meeting, though, as I definitely stated yesterday, that is simply my best recollection.

By Mr. Leahy:

Q.—Do they or do they not refresh your recollection? *A.*—They refresh my recollection to some degree, though I already knew that these are the instructions that the Board of Trustees gave by official action.

Q.—To what particular part of the minutes do you refer when you say they constitute instructions? *A.*—"That Drs. Woodward and Leland be requested to go to Washington to see what they can learn and try to advise the Medical Society of the District of Columbia if that Society is willing to accept advice."

Q.—In the letter where it is stated that the instructions had been carried out does that refer to the trip which Dr. Woodward and Dr. Leland had made to Washington? *A.*—Yes; I think that is correct, sir. There were other instructions, later, and it may have been that I confused the two in some statement that I have made.

Q.—What were the other instructions? *A.*—The other instructions were at a meeting of the Board of Trustees where Dr. Fishbein, as Editor of THE JOURNAL, and I, as Secretary and General Manager of the Association, were instructed, as I recall it, to develop the facts so far as we could about Group Health Association and have a statement prepared for publication in THE JOURNAL.

By Mr. Leahy:

Q.—I show you Exhibit 120, which is a carbon copy of a letter from Dr. West to Dr. Walter D. Wise, dated Nov. 16, 1937. *A.*—That is a copy of a letter which I addressed to Dr. Wise.

Q.—Doctor, I notice that you begin your letter by stating "While I am delighted to have your letter of November 12"—

I will ask you whether there was any other occasion for writing to Dr. Wise that you can now recall than to answer the letter which he wrote to you? *A.*—None in the world, that I know of, sir.

Q.—By the way: let me ask you this. In the preparation of your replies to letters which you received from various individuals, did you in any way collaborate with any of your fellow officers of the American Medical Association? *A.*—In writing letters signed by me?

Q.—Yes. *A.*—No, sir; I did not, except perhaps if I wanted information that I did not have I may have asked them for it before I wrote the letter.

Mr. Leahy:—I will read the portions of the minutes of the meeting of the Judicial Council of Nov. 12, 1937, which were offered in evidence:

"Dr. Richard C. Cabot and the Group Health Association meeting: Several letters of complaint against Dr. Richard C. Cabot, Boston, Mass., were presented to the Council. These complaints had to do with Dr. Cabot's address under the auspices of the Home Loan Bank Board's Group Health Association as reported in newspapers. After consideration of the matter it was moved by Dr. Burns, seconded and carried, that the secretary of the Judicial Council be requested to bring the matter to the attention of the Massachusetts Medical Society through its secretary and to write Dr. Cabot that before the Judicial Council considers any action in the matter it would like to know whether or not he said the things he is reported in newspapers to have said in his address at the meeting held under the auspices of the Home Loan Bank Board."

By Mr. Leahy:

Q.—Have you any independent recollection of having been present at that meeting of the Judicial Council? *A.*—Yes, sir.

Q.—Were you at that time the secretary of the Judicial Council? *A.*—Yes, sir.

Q.—Were those minutes prepared by you or under your supervision? *A.*—Yes, sir.

Q.—Was it or was it not a fact that several letters of complaint against Dr. Richard C. Cabot of Boston were presented to the Council? *A.*—I don't know how many were presented to the Council. There were a number that had been received. I don't remember how many—several. The routine was followed and those matters were referred to the Judicial Council for such official disposition as they wished to indicate.

Q.—Is the Dr. Richard C. Cabot mentioned here the same Dr. Cabot who appeared on the stand in this case? *A.*—No, sir; he is a brother.

Q.—What jurisdiction did the Judicial Council have in the premises where complaints of this character were referred to it? *A.*—Apparently it thought it had no jurisdiction, because I was instructed to refer them to the secretary of the State Society of which he was a member.

Q.—Do you now have any recollection as to whether or not anything further happened to it? *A.*—As far as I recall, no action was taken by the Massachusetts Medical Society.

Q.—That was the end of the matter? *A.*—So far as my memory goes; yes, sir.

Mr. Leahy:

"Definitions requested by Dr. Kingsley Roberts: The secretary presented the request of Dr. Kingsley Roberts, Medical Director of the Bureau of Cooperative Medicine of the Cooperative League of the United States of America, for definitions of solicitation, advertising, and contrary to good public policy. No definite action was taken by the Council, but there was no objection to giving Dr. Roberts the definition of solicitation as adopted by the Judicial Council. The Judicial Council has never defined the terms 'advertising' or 'contrary to good public policy.'"

By Mr. Leahy:

Mr. Leahy:—This is addressed to Dr. Walter D. Wise, Secretary of the Medical and Chirurgical Faculty of the State of Maryland, Baltimore:

"Dear Dr. Wise:

"While I am delighted to have your letter of November 12, I am sorry indeed that you will not be with us at the annual conference of secretaries of constituent state medical associations. I think that some of the matters that will be discussed at the conference are of tremendous importance and in some particulars are probably more important than any other matters that have ever been considered at similar meetings.

"We have done all we could to oppose the Group Health Association, Inc., in Washington, but in spite of our best efforts the scheme has gone into operation. We have worked as closely as possible with the Medical Society of the District of Columbia. As a matter of fact, our efforts began before the Medical Society of the District of Columbia became very active. It is my purely personal opinion that it is an outrage that an agency of the Federal Government should finance a corporation that is engaged in the practice of medicine in the face of the fact that the laws of most of the states specifically declare all corporate practice of medicine to be illegal.

"I respectfully suggest that the Medical and Chirurgical Faculty of the State of Maryland make proper representations to the members of Congress from Maryland with respect to this matter."

By Mr. Leahy:

Q.—Doctor, when you stated that you had worked as closely as possible with the Medical Society of the District of Columbia, to what did you refer? *A.*—Well, the American Medical Association worked as closely as possible in cooperation with all constituent state and territorial associations, but I suspect that in this particular instance I had some reference to the matters that were at the time of interest in Washington.

Q.—Do you recall now what you referred to when you stated that your efforts began before the Medical Society of the

District of Columbia became very active? *A.*—I think that is true. I think we began an effort to develop the facts about this matter before the Medical Society of the District of Columbia began any action whatever, possibly before they were informed about it. I am not sure of that, but I think it is quite possible.

Q.—And those were the efforts which you told us about yesterday? *A.*—To some extent; yes, sir.

Q.—Were there any others which you can recall which related to other matters than the collection of data? *A.*—As I stated yesterday, anything that transpired was incidental to our efforts to develop the facts.

Q.—I am now showing you, Doctor, Government's Exhibit 136, purporting to be the minutes of the Board of Trustees of the A. M. A. dated Nov. 18 and 19, 1937, pages 156 and 157. Will you kindly look that photostatic copy over and see if it refreshes your recollection so that you can identify the same? *A.*—That appears to be an extract taken from the minutes of the Board of Trustees of the American Medical Association.

Q.—Do you have any independent recollection now, Doctor, as to whether you were present at the meeting? *A.*—I was.

Q.—In what capacity? *A.*—As Secretary and General Manager of the American Medical Association.

Mr. Leahy:—It is entitled "Group Health Association, Inc.":

"As has been previously explained, the Federal Home Owners Loan Corporation has granted $20,000 a year for two years to the Group Health Association, Inc., to aid it in getting started and to provide the expensive modern equipment which will be used in the clinic. Thus the Federal Government is providing funds to finance a corporation that is engaged in the practice of medicine, in spite of the fact that corporation practice has been declared to be illegal in numerous court decisions, including decisions handed down by Federal courts.

"Dr. West reported that a committee of the Medical Society of the District of Columbia had visited the headquarters office early in the month for the purpose of conferring with him, Dr. Woodward and Dr. Leland with respect to the Group Health Association, Inc.; that he had brought what apparently amounted to a demand to the Association to devise further means and ways of opposing the continued operation of the Group Health Association, Inc., and that it had been intimated that the American Medical Association had not concerned itself with anything but scientific matters, in spite of the fact that he and Dr. Woodward had conferred with the District Society in Washington on instructions from the Board; that a write-up had appeared in THE JOURNAL concerning the matter; that diligent efforts had been made to develop information concerning Group Health Association, Inc., and to procure a copy of its contract, and in spite of the fact that the headquarters office on instructions of the Board of Trustees had done everything it could to combat the movement on the basis of the fact that it is contrary to the policies of the House of Delegates.

"In this connection Dr. West presented a newspaper account of a meeting held at the Mayflower Hotel on October 30 to usher in the Group Health Association, Inc., which, it was stated, would open its clinic on the following day, by members of the Federal Home Loan Bank Board and affiliated agencies. The newspaper contained a statement given out by Dr. Richard C. Cabot lauding group medical practice and criticizing the medical profession. This matter, he stated, was referred to the Judicial Council, which had requested him to contact Dr. Cabot to ascertain whether or not he was incorrectly quoted in the newspaper item. A letter has been written to Dr. Cabot, but thus far no reply has been received.

"Dr. Cullen moved that Dr. West be requested to explain the whole matter of the activities of the Group Health Association, Inc., before the Conference of Secretaries of Constituent State Medical Associations and Editors of State Medical Journals on Friday. Dr. Hayden seconded the motion and it was carried."

By Mr. Leahy:

Q.—Doctor, do you recall now whether or not you had written a letter to Dr. Richard C. Cabot asking him if the newspapers had correctly quoted him in the matter of his speech at the Mayflower Hotel on October 30? *A.*—I now recall that I did. The purpose of that, as I understand it, was to let Dr. Cabot know that this matter had been brought to the attention of the Judicial Council and to give him an opportunity to make any such statement as he might want to make.

Q.—Did you receive any reply? *A.*—To this good day I think no reply has ever been received.

Mr. Lewin:—He is dead, is he not?

By Mr. Leahy:

Q.—Is Dr. Cabot dead now? *A.*—I think he died very recently, within the last two or three months, I think.

Q.—I do not suppose the shock of receiving that letter killed him. *A.*—I hope not.

Q.—Doctor, do you recall now whether or not the American Medical Association had done anything further than what is reported in these minutes? *A.*—With respect to Dr. Cabot's statement?

Q.—No; with respect, now, to Group Health Association. *A.*—In a general way, no; it had done nothing further. It had pursued the same procedures all the way through, simply in an effort to develop the facts and to make ready to publish the facts.

(The witness then went over his correspondence with Dr. Robert B. Poling, secretary of the Mahoning County Medical Society of Youngstown, Ohio.)

(In response to inquiry from Dr. Poling, Dr. West wrote in part:)

"The American Medical Association has done everything that it could do to oppose the organization and operation of the Group Health Association, Inc., in the District of Columbia. I think I am safe in saying that the American Medical Association became active in this matter before the Medical Society of the District of Columbia began its efforts in opposition."

(Then he had given the information relative to the relationship of H. O. L. C. and the difficulty of securing copy of the contract. He spoke also of the doubt of the legality.)

By Mr. Leahy:

Q.—Doctor, I now show you exhibit 145, which appears to be an opinion of the Judicial Council of the A. M. A. I will ask you if you can identify that. *A.*—I think that is an opinion of the Judicial Council, signed by the individual members of the Council.

Mr. Leahy:—This appears to be an opinion on an appeal to the Judicial Council of the American Medical Association by Drs. Curtin, et al., quite a few names, Rueth, Sullivan, Walters, Dallwig.

It reads:

"In 1935, at a meeting of the State Medical Society of Wisconsin, action was taken disapproving the establishment of any plan for the medical care of low income groups by persons not representing the State or County societies.

"On Feb. 8, 1936, a special meeting of the Board of Directors of the Medical Society of Milwaukee County was called to discuss a plan for the care of the employees of the International Harvester Company proposed by Drs. Curtin, Rueth and others. Drs. Rueth, Curtin and Dallwig were present. The essential features of the plan as presented by this group were as follows:

"1. Unlimited medical and surgical service for $1 per month for a single man; $2 per month for man and wife; $3 per month for man, wife and family.

"2. Only diseases excluded from the plan—mental and contagious. Hospitalization not included.

"3. There would be no solicitation of patients.

"4. All physicians who joined the clinic would benefit from any profits.

"5. Patients may select any physician on the staff.

"6. Preventive treatment not included in the plan.

"7. No written contract between patient and clinic. Participants in plan restricted to those with income of $200 or less per month.

"It was stated that plans to remodel proposed offices had been made, a lease had been signed, but no equipment had been purchased.

"Between Feb. 10, 1936 and February 14, meetings of the Public Policy Committee and the Board of Directors were held and Drs. Curtin, Rueth and Dallwig notified by letter that the plan disapproved. At the February 14 meeting the Board of Directors directed letters requesting resignation from the society be sent to the doctors proposing the plan. These letters were sent February 18 and were in the form of charges citing nine offenses.

"Late in February, on the advice of counsel the doctors proceeded with their plan and on February 26th announced that the clinic would open for business April 1, 1936. In their letter of announcement they stated that subscribers 'must come of their own free will and without solicitation,' making it very plain that the doctors as physicians were so restricted by the Principles of Medical Ethics.

"March 1936. About the middle of March the International Harvester Council (an employers' organization) prepared 'Instructions to Patients,' of which the clinic doctors had one thousand copies printed to be given out in the plant to those subscribing to the plan.

"March 17 the doctors by letter refused to resign from the medical society denying all charges contained in the letter requesting their resignation. March 20 at a special meeting the Board of Directors formally preferred charges and directed that an answer be filed by March 27. The doctors made answer and a hearing was had March 30. At this hearing the accused were found guilty and expelled on three counts, viz:

"1. Violation of chapter XI, Sec. 3, By-laws of the State Society (conduct tending to defeat the purposes of the society).

"2. Violation of Chapter III, Art. 1, Sec. 4, Principles of Medical Ethics (Solicitation of patients, advertising).

"3. Violation of Chapter III, Art. VI (Revised), Sec. 3. Principles of Medical Ethics (contract practice contrary to sound public policy).

"Appeal from the action of the board of directors of the Medical Society of Milwaukee County to the Council of the State Medical Society of Wisconsin and from the decision of that Council approving the action of the county society to the Judicial Council of the American Medical Association was duly made and heard. The claim was made by the appellants before the Judicial Council that they had not had a fair trial before the Council of the State Medical Society of Wisconsin by reason of the fact that the executive secretary of the state association had furnished legal counsel at the trial of the appellants before the board of directors of the Medical Society of Milwaukee County, thus prejudicing the council of the State Medical Society of Wisconsin against their cause on appeal. The Judicial Council finds no evidence supporting such claim. It believes that such employment was customary and only for the purpose of protection of both sides of controversies by assuring that procedure should be correct and each side protected in its rights. The

counsel was discharged on the completion of the trial before the board of directors of the county society and had no connection with any further procedures.

"The Judicial Council affirms the action of the council of the State Medical Society of Wisconsin in respect to the charge of violation of Chapter III, Art. I, Sec. 4, of the Principles of Medical Ethics (solicitation of patients, advertising). The board of directors of the county society found these appellants guilty on this charge. The council of the state society affirmed that decision. The Judicial Council finds no error in the interpretation of the Principles of Medical Ethics by either of these bodies, nor error in procedure.

"The Judicial Council affirms the action of the Council of the State Medical Society of Wisconsin in respect to the charges of violation of Chapter III, Art. VI (Revised), Sec. 3, Principles of Medical Ethics (contract practice contrary to sound public policy). The appellants claim that at the time charges were preferred against them (March 20, 1936) and they were expelled (March 30, 1936) they were not operating under the plan and engaging in contract practice; that their practice under the plan did not begin until April 1, at which time the clinic was opened; that therefore they were not guilty when and as charged.

"The fact that no medical care had as yet been given at the time charges were preferred is not a reversible error in procedure. The appellants had abundant warning that the plan under which they proposed to operate was disapproved by the board of directors of the county society. They officially presented their plan to the board on Feb. 8, 1936. On February 14, after disapproval of the plan, and after statements by the appellants to the board of directors that they would prosecute the plan even though disapproved, they were officially notified of disapproval and request for their resignation was made, which request was refused.

"That at the time charges were preferred against them they had not as yet treated a patient under the plan is inconsequential. Certain preliminary preparations to treat patients necessarily had to be made before giving service but such preparations would not be made unless assurance were had by either written or verbal agreement or understanding which constituted a contract. The appellants were therefore engaged in contract practice from the time the agreement was made notwithstanding the fact that the preparations to treat patients had not been completed.

"The Judicial Council is distinctly of the opinion that practice under the terms and conditions to which these appellants have agreed with the employees of the International Harvester Company constitutes a violation of Chapter III, Art. VI (Revised), Sec. 3, of the Principles of Medical Ethics (contract practice contrary to sound public policy).

"In respect to the charge that the appellants violated Chapter XI, Sec. 3, By-laws of the State Medical Society of Wisconsin, the Judicial Council makes no pronouncement. It is not necessary that an accused shall be guilty on all charges made. If an accused is guilty on one or more major charges and no reversible error in the procedure of the trial is found, the Judicial Council will not interfere in the verdict pronounced by the county society and upheld by the state association. These appellants were found guilty by the board of directors of the Medical Society of Milwaukee County on two major charges of violation of the Principles of Medical Ethics of the American Medical Association, which action was sustained by the council of the State Medical Society of Wisconsin. There was no reversible error in the proceedings.

"The action of the board of directors of the Medical Society of Milwaukee County and of the council of the State Medical Society of Wisconsin is approved."

Then there appear, Doctor, five names. Are you familiar with those parties whose names appear on this document? *A.*—Yes.

Q.—Who is the first? *A.*—John H. O'Shea, Spokane.

Q.—The second? *A.*—John W. Burns, now deceased.

Q.—Walter F. Donaldson. *A.*—Walter F. Donaldson, of Pittsburgh.

Q.—Edward R. Cunniffe. *A.*—Yes, Edward R. Cunniffe, of New York.

Q.—And George Edward Follansbee. *A.*—George Edward Follansbee, of Cleveland, Ohio.

Q.—Were you present in any capacity at that time, at the time this particular appeal was heard by these five members of the Council? *A.*—I was there during part of the hearing of the matter by the Judicial Council. That hearing was held in Atlantic City, at which time I was busily engaged in the House of Delegates and attended the meetings as much as I could.

Q.—Government's Exhibit 24, I should say 124, is identified as "Talley to West," Feb. 16, 1938. Will you look at that letter and see if you can identify it as one having been received by you? *A.*—Yes, I received that letter.

Here followed the complete correspondence with A. T. Talley and Drs. Walter A. Coole, Conklin and Follansbee covering the matter of Raymond Selders and his membership in the Harris County Medical Society.

Q.—At the time you wrote this letter to Dr. Follansbee, were you Secretary of the Judicial Council of the American Medical Association? *A.*—Yes.

Q.—And when you wrote this letter of April 21, 1938 to Dr. Follansbee, will you explain why in connection with enclosing the telegram of Dr. Talley you also stated the fact which you set forth in that letter? *A.*—Simply for the information of Dr. Follansbee; he may not have had certain of that information and I transmitted it for what purpose it might serve. If it is permissible or admissible, I think it is possible that there is a mistaken statement in this letter.

Q.—Will you generally refer to the one you think is error? *A.*—The statement:

"We were definitely informed that the United States Attorney for the District of Columbia has ruled that the Home Loan Bank Board had no legal authority for providing funds for the support of the Group Health Association, Inc."

I am not at all sure that it was the District Attorney of the District of Columbia that made that ruling; my recollection is that—

Mr. Kelleher:—We object to this.

Mr. Leahy:—What was that, Doctor?

Mr. Lewin:—He has corrected the error.

Mr. Leahy:—Don't you want to hear the correction?

Mr. Lewin:—No.

Mr. Leahy:—He is going to show whose name should have been in there. Well, was the error as to the fact or as to the name?

The Witness:—It is an error, if it is an error at all, in the designation of the official. I have no disposition except to be fair in the matter.

By Mr. Leahy:

Mr. Leahy:—Directed to Dr. West on the official stationery of the American Medical Association. It reads:

"Dear Dr. West:

"Acknowledging receipt of yours of April 21 concerning the situation of Dr. Raymond E. Selders and the Harris County Medical Society of Texas.

"The telegram of A. T. Talley, Chairman of the Board of Censors, Harris County Medical Society, asking for an official opinion and ruling by the Council, is a rather mixed-up situation, on which I would not express an opinion without further information. Upon receipt of your letter of April 21 I immediately wired Dr. Talley as follows:

"'Is Selders in good standing in County Society? Has error procedure been strictly followed? Send air mail constitution and by-laws county and state.'

"Up to this afternoon I have received no reply whatsoever. There would be a question in my mind of the jurisdiction of the Harris County Society to the extent of expelling a man for actions occurring so far away from the County Society as to be difficult of proof and also difficult to permit a defense by the accused. The statement in the telegram that the County Society would put this entire matter up to the Judicial Council of the American Medical Association as a primary organization for action, I believe, is not provided for in our constitution except on investigation of the circumstances by the Judicial Council and request by them for action by the president. The telegram also says that the trial comes up on the 27th of this month, which is today. It seems strange to me that they should go so far as to be up against the actual trial of the man before they come to the Judicial Council for advice. It looks to me like a very precipitated action, a situation in which I am not satisfied to place the Judicial Council in any position where just criticism can be brought before them. I have not replied to Dr. Talley's telegram and will not until I receive further word from him.

"If you have any further information or any suggestions on this case I shall be pleased to receive them.

"Sincerely yours,
"George Edward Follansbee,
"Chairman."

Here there was read into the evidence a complete statement by Dr. Walter A Coole in the case of Raymond Selders and the Harris County Medical Society.

By Mr. Leahy:—

Q.—Doctor, have you any independent recollection now of having had any further correspondence with the Harris County Medical Society or the Judicial Council of the American Medical Association in reference to this matter? *A.*—My recollection is, Mr Leahy, this matter received official consideration by the Judicial Council, and I think it is quite probable I communicated with the Harris County Medical Society to advise them of any conclusion that may have been reached by the Judicial Council.

Q.—How often did the Judicial Council of the American Medical Association meet regularly? *A.*—Well, it now, I believe, meets three times a year; they have three different meetings during the year, generally, as I recall, in the early part of the year; and it meets daily during the annual session of the Association, and has a third meeting later on in the year.

Q.—When you say at the "annual meeting of the Association," do you refer to the meeting of the House of Delegates? *A.*—It is the annual session of the Association at which the House of Delegates convenes and transacts its business.

Q.—Does the American Medical Association membership, as such, meet annually, as distinct from the House of Delegates? *A.*—They have a scientific program, scientific exhibits, technical exhibits.

Q.—And how often does the membership of the American Medical Association meet? *A.*—The scientific assembly is the scientific part of the organization, which meets during the week of the annual session.

Q.—And what do you refer to when you talk about these exhibits? *A.*—The Scientific Exhibit is probably the largest and

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most instructive of its kind ever developed by any organization. It is an exhibit in which scientific advancement in research and development in research; scientific advancement in the methods of treatment, diagnosis of disease, matters of that kind, are illustrated and demonstrated by those really responsible for the exhibit. Many times the most outstanding men in that particular field.

By Mr. Leahy:

Q.—Doctor, this exhibit seems to close the correspondence between you and Dr. Follansbee, or the Board of Censors of the Harris County Medical Association. Do you recall whether the Judicial Council of the American Medical Association ever took any action with reference to Dr. Selders' membership, referred to in this correspondence, which we have just read? *A.*—I don't think it took any action with respect to Dr. Selders' membership. It is my recollection that it finally decided that it had no jurisdiction of the matter as it then stood. That is my recollection.

Q.—And nothing further was done about it? *A.*—I think—if I am correct in my recollection of the affair—that nothing further was done by it except to notify the Harris County Medical Society that the Judicial Council had no jurisdiction in the matter, as it stood.

Q.—Can you tell us who Dr. Erskine is? *A.*—He is a physician who resides in Cedar Rapids and who is, I believe, engaged in the practice of medicine in that community.

Q.—After having glanced at the first sentence of this exhibit, can you tell us now, Doctor, whether you had any other occasion for the writing of the exhibit than what is expressed in that first sentence? *A.*—None in the world.

Mr. Leahy:

"Dear Dr. Erskine:

"I have before me a copy of your letter of September 9 addressed to Dr. Fishbein.

"I gather from your letter that you do not understand that the Group Health Association in Washington is a corporation engaging in the practice of medicine. Inasmuch as our information has been to the effect that the practice of medicine by a corporation is illegal under the laws of many states and that many court decisions have been handed down declaring the practice of medicine by corporations to be illegal, and because the American Medical Association has opposed illegal practice as well as for other reasons perfectly obvious to those who are familiar with the facts, the American Medical Association has opposed the Group Health Association, Inc. The opposition of the American Medical Association has been based on the policies established by its House of Delegates, in which all constituent state medical associations are represented by their own duly elected delegates. Incidentally, there has been a very persistent effort on the part of certain agencies and groups to make it appear that members of the administrative personnel of the American Medical Association had presumed to attempt to define the policies of the Association which, of course, is quite untrue. The officers and members of the official bodies and members of the administrative personnel of the Association have done nothing more nor less than try to comply with official instructions received from the House of Delegates and to maintain and carry out the policies established by that body.

"With most cordial good wishes, I am

"Very truly yours,"

Q.—Is it or is it not a fact that the administrative heads of the American Medical Association have no control over establishing policies of the American Medical Association? *A.*—It is a fact that they have nothing to do with the establishment of the policies of the American Medical Association. Those policies are established by the House of Delegates.

Q.—What jurisdiction have the administrative personnel of the American Medical Association with respect to the policies other than to carry out the directions given by the House of Delegates? *A.*—Well, it is their simple duty to do what they can to maintain and carry out the policies established by the House of Delegates. It is a fact, of course, that under the constitution and by-laws the board of trustees is empowered to act for the House of Delegates in the interim between meetings of the House, and in certain instances matters have arisen in which action was essential and the Board of Trustees has then given instructions to the administrative personnel as to what should be done.

Q.—Would you kindly look at the exhibit which I show you, Doctor, and see if you can identify it? *A.*—That is a copy of a letter which I addressed to Dr. Arthur W. Erskine under date of Sept. 29, 1938.

Q.—Doctor, in the first sentence of this exhibit, which is No. 129, dated Sept. 29, 1938, you said:

"I have before me your letter of September 9 addressed to Dr. Fishbein to which is attached a copy of a letter addressed to you by Dr. A. H. Woods."

Do you recall any other occasion for writing this exhibit 129 than to answer the letter of September 9 which you therein mention? *A.*—I do not; no, sir.

Mr. Leahy:

"It seems evident to me that neither you nor Dr. Woods understand the situation that has developed in Washington. In the first place, Group Health Association, Inc., is a corporation engaged in the practice of medicine. The laws of many of the states and of the District of Columbia itself contain provisions declaring practice by corporations to be illegal. While it is true that one of the Judges of the United States District Court for the District of Columbia, a trial court, not an appellate court, has handed down a decision declaring Group Health Association, Inc., to be legal, the fact remains that the United States District Attorney for the District of Columbia specifically ruled that Group Health Association, Inc., was a corporation illegally engaged in the practice of medicine, and the Corporation Counsel of the District of Columbia expressed his opinion to the effect that Group Health Association, Inc., was unlawfully engaged in the insurance business. Since the decision of the United States District Court for the District of Columbia a suit has been instigated by individual physicians in Washington seeking a decision from a higher court as to the legality of the activities of the Group Health Association, Inc.

"With respect to the activities of the Department of Justice pertaining to the American Medical Association, I am sure that you will be interested to know that we have never had any communication whatever from the Department of Justice with respect to this matter, although various newspaper statements have been released by an official of the Department of Justice which, designedly or not, have undoubtedly poisoned the public mind against the organized profession in the United States. The timing of these newspaper releases has been a most interesting factor in the situation. The facts about these matters were submitted to the House of Delegates at San Francisco as well as to the House of Delegates at the special session held in Chicago last week, and the officers and members of the administrative personnel of the Association have been given definite instructions by the House of Delegates, which is the policy-making body of the Association.

"The American Medical Association has announced that it has no objection whatever to any fair and reasonably conducted investigation of its affairs by any official agency. As a matter of fact, an agent of the Federal Bureau of Investigation has recently visited the offices of the Association and has been shown everything that he asked to see. In my opinion it is highly important to remember that the Department of Justice has sent no communication about the matter to the officers of the American Medical Association, nor did it make any effort whatever to ascertain from the Association itself any facts pertaining to the matters referred to in these newspaper releases."

By Mr. Leahy:

Q.—Have you any independent recollection, Doctor, of what the Erskine letter was, other than what is indicated in your reply thereto, in this exhibit? *A.*—I have no definite recollection about it, Mr. Leahy. That is, I have no recollection that is clear enough to attempt to recite what was in the letter, but I take it that that is an effort to answer any statements that may have been made in the two letters, one, I believe, from Dr. Erskine, and the other from Dr. Woods.

Q.—Do you know who Dr. Erskine is? *A.*—Yes. I have met him, I think, several times. He is a practicing physician in Iowa.

Q.—Do you know Dr. A. H. Woods? *A.*—If I do, I do not now recall him.

Q.—Do you recall now, Doctor, whether it was or was not a fact that agents of the Federal Bureau of Investigation were in the offices of the American Medical Association at or about this time? *A.*—Yes, sir.

Q.—What opportunity were they given to inspect the files of the American Medical Association? *A.*—There were several of them there at various times, and I think they were all told they were quite at liberty to see anything that was in the office.

Q.—Do you recall whether or not any communication was ever received from any official of the Department of Justice to "ascertain from the Association itself any facts pertaining to the matters referred to in these newspaper releases"?

Mr. Kelleher:—I object to that. It is immaterial.

THE COURT:—I think you have a right to ask him whether the facts stated in there are true. I do not see any reason for taking it up in detail.

Mr. Leahy:—No; I am not going to, your Honor.

THE COURT:—Will you read the question, Mr. Reporter?

(The pending question was read by the reporter as above recorded.)

The Witness:—Shall I answer that?

THE COURT:—I have stated that the witness may state whether the facts stated therein are correct.

Mr. Leahy:—That is a quotation from the letter.

The Witness:—If any communication was ever received from the Department of Justice it certainly never came to my attention—that is, pertaining to the facts of the situation as it had developed. We had communications in the form of subpoenas, plenty of them.

By Mr. Leahy:

Q.—I show you now Exhibit 132, which is dated Oct. 8, 1938 and appears to be a carbon copy of a letter again to Dr. Erskine, president of the Iowa State Medical Society, and I ask you if

you can identify that? *A.*—Yes, sir. I identify that as a letter which I addressed to Dr. Erskine under date of Oct. 8, 1938.

Q.—I will ask you, Doctor, if the first sentence of this letter indicates the receipt of any letter by you to which that was a reply? *A.*—It indicates the receipt of a letter from him under date of Sept. 30, 1938.

Q.—Do you recall now whether you had any occasion to write this exhibit 132 other than in reply to his letter of September 30? *A.*—No, sir; none whatever.

Mr. Leahy:

"Your letter of September 30 was received in due time. I do not know how I can convince you that the statements made in my letter are not mistakes, other than to assure you that I know exactly what I said and I know that the situation is as stated."

(The rest of this letter again discussed fully the record and the question of the legality of G. H. A.)

By Mr. Leahy:

Q.—Doctor, I am now showing you Exhibit 133, which is dated Oct. 12, 1938 and appears to be a carbon copy of an original directed to one Dr. Fred Hammerly, Long Island College Hospital, Brooklyn. Will you kindly glance through that exhibit and see if you can identify it for us? *A.*—Yes, sir. I identify it as a copy of a letter which I addressed to Dr. Fred Hammerly under date of Oct. 12, 1938.

Q.—Doctor, what occasion had you for writing this letter other than in reply to a letter received by you from Dr. Hammerly dated September 24? *A.*—None in the world. My recollection is that a letter came to me that was addressed to Dr. Fishbein and was referred to me for reply, and I replied.

Mr. Leahy:—It is directed to the address indicated on the date already mentioned, and it reads as follows:

"I have before me your letter of September 24 addressed to Dr. Morris Fishbein and referred to me for reply.

"My information is to the effect that Group Health Association, Inc., in Washington, D. C., is a corporation established for the purpose of providing medical service to its members through the instrumentality of an employed group of physicians.

"Very truly yours."

(The rest of this letter was like previous letters.)

By Mr. Leahy:

Q.—Doctor, in writing this letter to Dr. Hammerly, which I have just read, did you or did you not state truthfully and accurately what information you had with reference to the matters and things about which you wrote? *A.*—Surely I did.

Q.—Have you any independent recollection now of the occasion for writing those facts? *A.*—My recollection is that in this letter of Dr. Hammerly he asked for information about Group Health Association, and I have a more or less distinct recollection to the effect that he was contemplating possible connection with that organization, and I simply stated to him the facts as I knew them, as I believed I knew them, and I offered him no suggestion whatever, other than to state the facts as I believed I had them.

Q.—I will now show you Exhibit 149, which appears to be a carbon copy of a letter which you wrote to Dr. Holman Taylor on Nov. 9, 1938. Will you kindly look at that and see if you can identify it to be as described? *A.*—I think I wrote this letter to Dr. Holman Taylor under date of Nov. 9, 1938.

Mr. Leahy:—It is dated and addressed as indicated:

"I am very greatly obliged to you for your kindness in sending me a copy of your letter addressed to Dr. Walter A. Coole, Secretary of the Harris County Medical Society, and a copy of the letter addressed to you by Mr. C. T. Freeman. I do not have available a copy of the constitution and by-laws of the Harris County Medical Society, but, generally speaking, there is a provision in the constitution and by-laws of many component county medical societies that membership in these societies shall be limited to local registered reputable physicians who reside and practice within the counties immediately concerned.

"It is my understanding that the gentleman referred to in the correspondence which you sent me is not engaged in practice in Harris County, but that he is actually engaged in the service of a corporation in a jurisdiction entirely outside the state of Texas.

"The by-laws of the American Medical Association specifically provide that—

"'A member of a constituent association who removes to and engages in the practice of medicine at a location in another state in which there is a constituent association shall forfeit his membership in this Association and the secretary shall remove his name from the roster of the members of the American Medical Association unless within one year after such change of residence he becomes a member of the constituent association in the state to which he has moved.'

"With most cordial good wishes, I am"—

By Mr. Leahy:

Q.—Doctor, have you any independent recollection of the occasion for writing the letter which I have just read? *A.*—Well, apparently I had received from Dr. Holman Taylor a copy of a letter which he had addressed to Dr. Coole, Secretary of the Harris County Medical Society, and a copy of a letter addressed to Dr. Taylor by Mr. C. T. Freeman, and this letter was written in reply to those communications, in so far as it applies; and it does apply.

Q.—Do you recall now whether or not the letters to which this was a reply called for information or something of that character? *A.*—I think they must have done so, since I quote the by-laws of the Association with respect to membership in a constituent association after a certain period of time, as it relates to membership in the American Medical Association.

Q.—Doctor, can you tell us now whether or not your connection with or relation to Group Health Association is pretty well indicated by these letters which we have just asked you about? *A.*—I am not sure that I understand your question.

Q.—Can you recall now whether or not you performed any other acts or did anything else concerning Group Health Association other than what has already been brought to your attention? *A.*—No; I cannot; other than as I have testified on this stand.

Q.—I mean, in general, from reading all of these letters. If you can, would you kindly indicate anything which may have escaped my attention in trying to refresh your recollection? If there was any act done or statement made to any one on any occasion with reference to G. H. A., if you can recall it will you kindly state it? *A.*—All I can say in reply to that question, Mr. Leahy, as I have already stated, is that what I did was concerned with the collection of facts for the purpose of publishing the facts, and of course these letters speak for themselves.

Q.—Now, Doctor, I want to ask you if in doing what we have just reviewed with you, you combined and conspired together with any one for the purpose of restraining trade in the District of Columbia? *A.*—I never conspired with any one consciously in my life, for any purpose that I know of.

Q.—(reading from indictment):

"(1) For the purpose of restraining Group Health Association, Inc., in its business of arranging for the provision of medical care and hospitalization to its members and their dependents on a risk-sharing prepayment basis"?

A.—I never conspired for that purpose, either.

Q.—

"(2) For the purpose of restraining the members of Group Health Association, Inc., in obtaining, by cooperative efforts, adequate medical care for themselves and their dependents from doctors engaged in group medical practice on a risk-sharing prepayment basis"?

A.—No, Sir.

Q.—

"(3) For the purpose of restraining the doctors serving on the medical staff of said Group Health Association, Inc., in the pursuit of their callings"?

A.—No, Sir.

Q.—

"(4) For the purpose of restraining doctors (not on the medical staff of Group Health Association, Inc.) practicing in the District of Columbia, including the doctors so practicing who are made defendants herein, in the pursuit of their callings"?

A.—No, Sir.

Q.—

"(5) For the purpose of restraining the Washington hospitals in the business of operating such hospitals"?

A.—No, Sir.

Q.—Doctor, what information had you, if any, with reference to what was being done with regard to Washington hospitals during this period we have been inquiring about, more particularly from Jan. 1, 1937 down to Dec. 20, 1938? *A.*—I had absolutely no information about it, unless it was purely incidental to statements that I may have seen in newspapers, particularly in Washington newspapers.

Q.—You will recall that on yesterday afternoon, in looking at the abstract of the minutes of the meeting of November 6 in Chicago, you stated that the abstract did not correctly quote you as to what in accordance with your best recollection you stated with regard to a question put to you therein by Dr. Hooe to the effect—

"Do you not think it is reasonable for the Washington hospitals to agree with the opinion which Dr. Hooe then expressed"—

Mr. Lewin:—Did we not have this yesterday?

Mr. Leahy:—No; I am just asking about it now.

By Mr. Leahy:

Q.—Do you recall to what I refer, Doctor? *A.*—Yes, sir.

Q.—Did you or did you not, when that statement was made, have any reference to agreeing with Dr. Hooe or Dr. McGovern or anybody else in that conference to restrain Washington hospitals? *A.*—Never in the world. I think even that statement that is attributed to me indicates that I clearly felt that the hospitals had the right and the duty to choose their own staffs.

Q.—I want to ask you, Doctor, whether under these rules—and these rules refer to the Principles of Medical Ethics of the American Medical Association—so interpreted, that is, as interpreted and applied by the American Medical Association and its affiliated and constituent and component societies, that the defendant American Medical Association and its affiliated constituent and component societies can and frequently do condemn as unethical group medical practice on a risk-sharing prepayment basis principally because such practice is in business competition with and threatens the income of doctors engaged in practice on a fee-for-service basis, and particularly doctors so practicing who are members of the defendant American Medical Association and its affiliated constituent and component societies. *A.*—I deny that statement absolutely. There is no such purpose in the mind of the American Medical Association.

Q.—Doctor, in the declaration or interpretation of Principles of Medical Ethics by the American Medical Association and its affiliated constituent and component societies does it, in that interpretation, take into consideration that risk sharing prepayment group medical practice threatens the incomes of doctors engaged in practice on a fee-for-service basis? *A.*—Well, I think it is true that in some instances they have threatened the income, but that is not the purpose of the American Medical Association in opposing such plans as it has opposed.

Q.—Is the opposition of the American Medical Association to schemes of group practice, prepayment or otherwise, based upon any competition in dollars and cents between the members of the American Medical Association and those groups? *A.*—If it is, I have never heard of it, sir.

Q.—What is the basis of the opposition of the American Medical Association to those group plans? *A.*—The basis of the opposition of the American Medical Association to such schemes as it has opposed has been due in practically all instances to the unsoundness of the plan—

THE COURT:—I think you went into this yesterday.

Mr. Leahy:—Did I, your Honor?

THE COURT:—I think you did.

Mr. Leahy:—Then I do not want to repeat.

By Mr. Leahy:

Q.—Could you tell us, please, to clear up a point that seems to be a bit obscure in our minds just how are the principles of ethics of the American Medical Association controlling, if they are, on constituent or component societies? *A.*—I think it is true, Mr. Leahy, that every constituent state and territorial association, with one exception, has fully adopted the Principles of Medical Ethics of the American Medical Association as the principles of medical ethics of its own, and I think it is true that in practically every instance component county societies of the constituent associations have likewise adopted the Principles of Medical Ethics of the American Medical Association.

Q.—Will you tell us whether such adoption is voluntary or obligatory? *A.*—So far as I know, sir, it is voluntary. There is one state association that has its own code of ethics. However, it is quite similar to the Principles of Medical Ethics of the American Medical Association. I have recently been informed by one of its most active members who has occupied an official position, that it also observes the Principles of Medical Ethics of the American Medical Association. That is the Medical Society of the State of New York, so that you may know definitely what it is.

Q.—Doctor, do you consider that the Principles of Medical Ethics are reasonable regulations of professional conduct in the practice of medicine?

Mr. Lewin:—Objected to as argumentative.

Mr. Kelleher:—And it calls for a conclusion.

Mr. Leahy:—Oh, no. This man is thoroughly familiar with those principles. He is an expert.

MARCH 20—AFTER RECESS

TESTIMONY OF DR. OLIN WEST

DIRECT EXAMINATION (RESUMED)

Mr. Leahy:—There was a pending question, if your Honor please, as to reasonable regulations of professional conduct in the practice of medicine.

THE COURT:—He may answer.

The Witness:—I consider them to be so, yes.

CROSS EXAMINATION

By Mr. Kelleher:

Q.—Let me show you what appears to be a photostatic copy of the minutes of the Board of Trustees for Sept. 15-17, 1938. Will you identify that document? *A.*—I think that is a photostatic copy of a section of the minutes of the Board of Trustees.

Mr. Kelleher:—I offer that in evidence.

Mr. Leahy:—Is there any way of fixing the date of that, Mr. Kelleher?

Mr. Kelleher:—The document shows it is from the minutes of September 15-17. Any objection?

Mr. Leahy:—No special objection, your Honor.

THE COURT:—It will be admitted.

Mr. Kelleher:—This document reads as follows:

THE COURT:—What is the number of that?

Mr. Kelleher:—658. "Sept. 15-17, 1938.

"Representatives of the Medical Society of the District of Columbia: The representatives of the Medical Society of the District of Columbia came before the Board and presented information relative to the situation in Washington. No action was taken."

By Mr. Kelleher:

Q.—Dr. West, do the minutes correctly reflect who were present at this meeting? *A.*—I don't think there are any names mentioned.

Q.—At the top it says

"At the meeting of the Board of September 15-17—Present,"

and then are listed those present. *A.*—Yes, all whose names are there are members of the Board, are ex officio members of the Board, or members of the administrative staff of the American Medical Association.

Q.—And they were present at this meeting? *A.*—I presume they were, because the minutes show it.

Q.—You kept the minutes? *A.*—No, the Secretary of the Board did that.

Q.—Do you recall this meeting? *A.*—I have no recollection of it, as to who was there.

Q.—Do you recall who came there as representatives of the District Medical Society? *A.*—No.

Q.—Is it true that whoever appeared reported on the Group Health Association at that time on the controversy here in the District of Columbia? *A.*—According to the minutes.

Q.—Is it true that the report made by the representatives of the Society was concerning Group Health Association and the controversy between it and the Society? *A.*—The minutes so state, I believe.

Q.—Well, the minutes state "relative to the situation in Washington, D. C.": I presume that was Group Health? *A.*—I presume it was.

Q.—You will recall, Dr. West, that this morning it appeared from the minutes of the meeting of the Board of Trustees that you were authorized to present the facts concerning Group Health to the Secretaries and Editors' Conference? *A.*—Yes.

Q.—And you did so? *A.*—Yes, in a very general way.

Q.—Now, does that Conference meet yearly? *A.*—It meets every year unless there are some circumstances arising to prevent it; it didn't meet this year.

Q.—And does that Conference include the editors of all state societies; and the secretaries? *A.*—Yes.

Q.—And I suppose Dr. Fishbein attends, because he is Editor of THE JOURNAL? *A.*—He does if he is in Chicago.

Q.—Who was E. A. Hines in 1937? *A.*—Dr. E. A. Hines, who recently died, was for some thirty-five years, I think I am correct in stating, the secretary of the Medical Society of North Carolina.

Q.—And was he chairman of the Secretaries' Conference in 1937? *A.*—I can't recall that; I don't remember.

Q.—It is customary for that Conference to elect a chairman? *A.*—Yes, somebody nominates one and he is elected.

Q.—How about other officers? *A.*—They do not elect any other officers than the chairman.

Q.—Do they keep minutes? *A.*—No, they usually have a stenographic report of the conference. For many years the proceedings of that conference were published almost in full, but they do not do that any more.

Q.—They were published in THE JOURNAL? *A.*—No, published originally in the *American Medical Association Bulletin.*

Q.—And when the *Bulletin* was taken over by THE JOURNAL, the proceedings of that conference were published in THE JOURNAL? *A.*—It was not taken over by THE JOURNAL; it stopped.

Q.—And whatever publicity functions the *Bulletin* performed were performed thereafter by THE JOURNAL? *A.*—Not all of them, but within the last year or two,—I don't recall just how long—there has been an organizational section of THE JOURNAL in which such matters formerly discussed in the *Bulletin* are discussed.

Q.—Do you recall that a stenographic report of the meeting of the Secretaries' Conference in 1937 was kept? *A.*—I think there was a stenographic statement of the Conference.

Q.—Now, Dr. West, as I understand your testimony, it is that the Principles of Medical Ethics, a copy of which I have in my hand, has been adopted by every state society in the country except one and are binding upon the society and its members? *A.*—I think I said that is true.

Q.—And I believe you also testified that every constituent society or component society rather, has done likewise? *A.*—I think that is true; practically all of them.

Q.—And isn't it true also that every member of the American Medical Association is bound by these principles of ethics? *A.*—Yes, supposed to be.

Q.—And isn't it also true that the American Medical Association expects that the component or constituent societies will discipline members of the American Medical Association who violate these principles of ethics? *A.*—It is expected that they do so if they think it is justified.

Q.—But if there is a violation of the principles of ethics, medical ethics, the American Medical Association expects its constituent or component societies to institute disciplinary proceedings for such violation, does it not? *A.*—It expects the component state and county societies to do what ought to be done.

Q.—But isn't it true that the American Medical Association expects the local societies to enforce these principles of medical ethics? *A.*—It is so provided in the constitution and by-laws of the societies themselves, to a certain degree at least.

Q.—And doesn't the American Medical Association expect the societies to do that? *A.*—The American Medical Association brings no compulsion—

Q.—I am not asking you that: I am asking you whether the American Medical Association doesn't expect its societies, component and constituents, to enforce the principles of medical ethics. *A.*—In so far as they should be enforced I should say so, yes, in a way.

Q.—I think it is true, is it not, that whenever you offered any advice in these letters which you wrote, and which Mr. Leahy went over with you this morning and yesterday, you wrote consistently with the policy of the American Medical Association. *A.*—I wrote consistently with what I understood to be the policy of the American Medical Association, yes.

Q.—And the same thing is true as to what you did in relation to Group Health Association? *A.*—Yes.

Q.—Now you testified yesterday that the Judicial Council of the American Medical Association had jurisdiction only to pass upon matters of law and procedure, is that true? *A.*—In appeals.

Q.—In appeals, yes. *A.*—Yes.

Q.—Isn't it also true that the Judicial Council also has jurisdiction over all matters of ethics? *A.*—The by-laws, if you will get me a copy—I have a copy if you will permit me to read it. Here it is in the by-laws. Can I read from this copy?

Q.—What page are you on? Page 22, I believe, is the section that is relevant. *A.*—This is Chapter IX of the by-laws, Section 1.

"Duties of Standing Committee or Councils.

"Section 1. The Judicial Council. The judicial power of the Association shall be vested in the Judicial Council, whose decision shall be final. This power shall extend to and include:

"(1) All questions involving fellowship in scientific assembly or the obligations, rights and privileges of fellowship.

"(2) All controversies arising under this constitution and by-laws, and under the principles of medical ethics, to which the American Medical Association is a party; and

"(3) (*a*) Between two or more recognized constituent associations, (*b*) between a constituent association and a component society or societies of another constituent association or associations or a member or members of another constituent association or other constituent associations and—"

THE COURT:—Doctor, the question is merely as to the jurisdiction of the Council as to medical ethics. I think he has read that.

Mr. Kelleher:—Which is in the second complete paragraph on page 22.

The Witness:—There is another section, I presume, that is admissible under your question which says:

"The Judicial Council shall have jurisdiction on all questions of ethics, and in the interpretation of the laws of the organization."

By Mr. Kelleher:

Q.—Yes, so that it is true, is it not, that the question of whether any particular act as found to have been done by a local society violates the principles of medical ethics ultimately depends upon the Judicial Council of the American Medical Association? *A.*—I presume that is true, but I have never known in all my experience any times when any questions have been brought before the Judicial Council—probably one or two exceptions—of the nature or kind implied in your question.

Q.—It is true, however, when you say that the Judicial Council passes on legal questions only, that it does pass— *A.*—On appeals.

Q.—Yes, on appeals, that part of the legal question is the question of whether a given state of facts violates the principles of medical ethics of the American Medical Association? *A.*—Well, I offer it as my opinion that the Judicial Council may find it necessary to hear statements concerning what is involved in an appeal in order that it may determine whether or not the procedure was properly taken.

Q.—I want to leave the question of procedure out of it. Suppose, taking the Ross-Loos case, suppose the American Medical Association had found that Drs. Ross and Loos had received a fair hearing by the County Society in California, and the State Society, wouldn't it have then been necessary for the Judicial Council to determine whether the conduct of those doctors, Ross and Loos, violated the principles of medical ethics of the American Medical Association? *A.*—I think that would depend altogether on the nature of the appeal, the question involved.

Q.—I understand. Suppose the appeal was such that it would be possible for the Judicial Council to pass on the question as to whether or not these principles of medical ethics had been violated: wouldn't it do so? *A.*—If it was required in passing on the appeal to do so, I assume the Council would.

Q.—And as a matter of fact in the Baird case, known as the Texas Street Railway case, the Judicial Council thought the conduct of these Texas doctors violated the principle of medical ethics of the American Medical Association and—

Mr. Leahy:—I object; the opinion speaks for itself.

THE COURT:—If the opinion is here, let's have it.

Mr. Kelleher:—I am not going to read the opinion; I just want to point something out to the witness.

THE COURT:—Is there anything, any evidence in the record concerning that case?

Mr. Kelleher:—The opinion is in.

Mr. Leahy:—No evidence.

Mr. Kelleher:—The opinion, it is in evidence.

THE COURT:—That is what I refer to. You might call his attention to some particular paragraph if you desire.

By Mr. Kelleher:

Q.—Isn't it true that the Judicial Council in the decision contained in Exhibit 144, held that the plan of the Texas doctors was contrary to sound public policy and therefore violated the principles of ethics of the American Medical Association? *A.*—I haven't seen this that I can recall in a long, long time.

Q.—Mr. Leahy showed it to you yesterday.

Mr. Leahy:—Is that away back in 1932?

The Witness:—1932, yes.

Q.—Will you answer my question now, didn't the Judicial Council conclude that the conduct of the Texas doctors involved in this case, the opinion of which is contained in Exhibit 144: Didn't the Judicial Council conclude that the conduct was unethical, because contrary to sound public policy?

Mr. Leahy:—I submit it speaks for itself.

Mr. Kelleher:—I am cross examining him on his statement yesterday that the Judicial Council passed only on questions of law and procedure.

Mr. Leahy:—It still speaks for itself.

THE COURT:—Yes, it does, but I don't intend to have it all read.

Mr. Leahy:—He is asking for an opinion as to what the document holds.

THE COURT:—The question was whether the Council in that case put their decision upon the construction of medical ethics. He can answer that; he has the decision before him.

The Witness:—That decision, as I read it, contains a statement to the effect that "the Judicial Council is of the unanimous opinion that this type of contract is unethical on the basis of being contrary to sound public policy."

By Mr. Kelleher:

Q.—So in that case, the Judicial Council did pass upon the ethics of these particular doctors.

THE COURT:—That is argumentative.

By Mr. Kelleher:

Q.—All right, your Honor. Isn't it true that the Judicial Council is the final authority on the interpretation of the principles of legal medical ethics as pronounced by the House of Delegates? If there has been an appeal from findings and decision of a local society, that is true, isn't it? *A.*—It is so stated in the by-laws which are read to you.

Q.—That is correct. *A.*—That is what the by-laws say.

Q.—So that if, as a matter of fact, the principles of medical ethics, as interpreted by the Judicial Council prohibited, as unethical conduct, group practice on a prepayment basis, isn't it true that the Judicial Council would finally pass upon such matters?

Mr. Leahy:—Objected to as argumentative.

THE COURT:—It is quite argumentative.

By Mr. Kelleher:

Q.—All right, your Honor, I will come to something more concrete. Yesterday, I believe you testified that there was no general policy of opposition to group practice on the part of A. M. A., is that true? *A.*—I did.

Q.—And group practice doesn't necessarily involve prepayment, does it? *A.*—No.

Q.—There may be a group of doctors associating themselves together to supply medical care on a fee-for-service basis? *A.*—That is correct, and I understand that there are plans for providing medical service that are not even prepayment plans.

Q.—I am now addressing your mind to group practice on a fee-for-service basis? *A.*—There are a number of such plans.

Q.—And so long as the doctors in those plans conform to the principles of medical ethics, of course, the A. M. A. has no policy of opposition toward such plans? *A.*—The A. M. A. —as I testified yesterday—adopted at Cleveland—

Q.—I don't mean to interrupt you, Doctor: I now would like to find out, break down this group practice. *A.*—I think the matter of professional ethics would be involved, yes.

Q.—But so long as the doctors were engaged in group practice on a fee-for-service basis, and so long as those doctors are otherwise ethical, the A. M. A. doesn't oppose such plans? *A.*—It doesn't oppose them unless it should be convinced by an investigation of the facts that the quality of services rendered is of an unworthy or unsatisfactory nature. That is covered by the rules and principles of ethics.

Q.—But so long as the quality of care is adequate, and the doctors are ethical, there is no opposition to group practice on a fee-for-service basis? *A.*—No.

Q.—Isn't it also true that within the last two years medical societies have sponsored prepayment plans which are approved by the American Medical Association? *A.*—Absolutely, and that is why those principles were adopted at the Cleveland session.

Q.—And so long as those plans, those prepayment plans, are sponsored by societies and permit all members of the society to participate, they conform with the standards of the American Medical Association? *A.*—If they are established after an investigation of the needs for such plans, and if they conform to the ten principles adopted by the House of Delegates for the guidance of such societies, why they are; and there is no objection; they are understood to be experimental.

Q.—And those prepayment plans sponsored by the local societies, to which the American Medical Association voices no opposition, do not involve group practice, do they? *A.*—That would depend on the interpretation of group practice. They do not involve group practice in the general acceptation of the term.

Q.—As a matter of fact in those plans every member of the society who so desires may participate? *A.*—Yes.

Q.—I now want to address your mind to group practice on a prepayment basis. I think it is true, is it not, that the Ross-Loos Clinic in Los Angeles is engaged in group practice on a prepayment basis? *A.*—It is engaged in operating a medical service plan on a prepayment basis.

Q.—But doesn't it involve group practice? *A.*—That organization was originally engaged in group practice as other physicians have been engaged in group practice, and then they altered their procedure by adopting a plan whereby contracts for medical services were sold.

Q.—But I am now trying to address your mind to the relationship of the staff: Is that not group practice? *A.*—It is group practice in the sense they have a number of physicians who are in the organization.

Q.—And they have physicians for the various specialties and general practitioners, isn't that true? *A.*—I don't know how many specialties are represented; I think they do have some specialists.

Q.—And within the common acceptation of the term they are engaged in group practice, are they not? *A.*—They are engaged in the operation of a medical service plan.

Q.—Isn't it group practice? *A.*—It wouldn't be in the general acceptation as applied to physicians who are not selling contracts.

Q.—Is it your testimony that the only thing which is group practice within the general acceptation of the term is practiced by a group on a fee-for-service basis? *A.*—The general acceptation of group practice is where a group of practicing physicians grouped together for the purpose of improving their own services and do not sell contracts; and those groups who engage in and operate a plan for medical services under contracts are usually called medical service plans.

Q.—So that your testimony yesterday that there was no opposition by the American Medical Association to group practice had no reference to plans which involve a group of doctors who sold their services on a contract basis? *A.*—No, there are such plans as that.

Q.—I want to know whether your testimony yesterday that the American Medical Association didn't oppose group practice was addressed to plans of this kind; those plans, involving prepayment, by a group of doctors who contract to supply the services to a group of individuals? *A.*—I can probably answer your question better by telling you that there are plans, medical service plans—consumer if you prefer—that are in operation today that have been approved and have never been objected to, in so far as I have knowledge, operated by societies in the counties in which they are located; and I can name some of them if you want me to.

Q.—I want to know whether your testimony yesterday that the American Medical Association had no policy of opposition to group practice, whether that testimony was intended to apply to plans like the Ross-Loos Clinic, and plans like Group Health. *A.*—It would depend entirely on whether they came within the principles adopted by the House of Delegates and principles of ethics.

Q.—Of course, that is the ultimate criterion. Now, isn't it true that the American Medical Association doesn't believe that plans like the Ross-Loos Clinic, like Group Health Association, do not fall within the principles of medical ethics of the American Medical Association? *A.*—I don't believe I can safely answer that question for the American Medical Association, in so far as the Ross-Loos is concerned.

Q.—I want your testimony as general manager, then. *A.*—My own opinion is, as I have stated in the letters presented yesterday, that there is danger in such plans, in many of such plans.

Q.—And don't you feel that such plans as the Ross-Loos Clinic are unethical because contrary to sound public policy? *A.*—Mr. Kelleher, I wouldn't say what my opinion about that is today, because I don't know what their procedure is now, but there was a time when I didn't hesitate to say that I thought they were unethical.

Q.—About 1936? *A.*—I can't tell you about that.

Q.—But at some time between 1930 and 1941, you did consider it unethical? *A.*—Yes.

Q.—Even though its quality of medical care was good? *A.*—At that time I didn't believe the quality of medical care which was being furnished was good.

Q.—Didn't you believe the quality of medical care was good in 1936, as supplied by the Ross-Loos Clinic? *A.*—I think; I have no faculty for remembering dates.

Q.—Let me see if I can refresh you. *A.*—I think there was a letter in which I expressed the opinion on the basis of information then before me that the services rendered by that particular group was good service.

Q.—That was in your correspondence with Dr. Freiberg?

Mr. Leahy:—What exhibit is that?

Mr. Kelleher:—141, addressed to Dr. Freiberg.

"I am informed that Doctors Ross and Loos are thoroughly competent physicians and that they have associated with them young men who are well qualified. I have heard from various sources that the Ross-Loos Clinic actually delivers good medical service."

You wrote that letter? *A.*—Yes, and I stand squarely behind it.

Q.—And that was on Feb. 6, 1936? *A.*—Yes, that was the information that I had at that time.

Q.—And at that time didn't you still consider it was nevertheless unethical because contrary to sound public policy? *A.*—I don't think I expressed any opinion as to the ethics of the thing since that time. If I knew what the Ross-Loos people were doing; how they were operating at this time I could tell you—

Q.—I am talking about 1936. Didn't you at that time advise Dr. Freiberg that you considered that the Ross-Loos Clinic was unethical, as being opposed to sound public policy?

Mr. Leahy:—I object; if it is in the letter show him the letter.

Mr. Lewin:—He has the letter.

THE COURT:—Point out the part to him.

The Witness:—There isn't a word in that paragraph about the Ross-Loos Clinic, sir, that I can see.

By Mr. Kelleher:

Q.—Isn't there a reference to the Ross-Loos Clinic in the second paragraph? *A.*—That is not the paragraph you directed my attention to.

Q.—All right, read the second paragraph then. *A.*—I stated in this letter that while I had frequently heard that the clinic mentioned—and somebody has written in there "Ross-Loos."

Q.—Whose handwriting is that; isn't that your secretary? *A.*—Not that I know of.

Q.—Well, you were talking about the Ross-Loos Clinic, were you not? *A.*—I couldn't tell you that unless I had the whole correspondence.

Q.—Well, here it is (handing document to the witness). *A.*—Here is a letter of Feb. 6, 1936, I wrote to Dr. Freiberg.

Q.—In that letter didn't you discuss the Ross-Loos Clinic? *A.*—Yes, the Ross-Loos Clinic is mentioned.

Q.—That was Feb. 6, 1936, and in March didn't you hear from Dr. Freiberg that a doctor in Cincinnati was considering starting a clinic like the Ross-Loos Clinic, and that the Cincinnati Academy of Medicine had decided that such a plan was unethical? *A.*—I had some telephone conversations with Dr. Freiberg, and then he came to my office at that time and told me of the nature of the clinic that Dr. Cook was preparing to establish in Cincinnati.

Q.—It was a clinic like the Ross-Loos? *A.*—In part, but we had discussed it at some length.

Q.—Do you refer to anything else in this letter; do you say anything about it being different from the Ross-Loos? *A.*—I had in mind when I wrote to him what he had told me on the telephone.

Q.—And that doesn't appear in the letter? *A.*—There was a mention of the Ross-Loos.

Q.—In Exhibit 141, dated Feb. 6, 1936, you make the statement that the doctors in the Ross-Loos Clinic are thoroughly competent; that they have associated with them young men who are well qualified, and that the Ross-Loos Clinic delivers good medical service. You said that, did you not?

THE COURT:—He answered that.

The Witness:—That was my understanding at the time.

By Mr. Kelleher:

Q.—And then on March 18, 1936, if you had learned from Dr. Freiberg, that the Cincinnati Academy had adopted a resolution that a plan like the Ross-Loos Clinic to be started in Cincinnati was unethical, you wrote him again on March 18, 1936. That is the letter you just read, isn't it? *A.*—Let me see that. Yes, I wrote him again, and I stated—if you will permit me to read it, that I was glad to have the information submitted in his letter.

> "I sincerely hope, of course, that the Cincinnati Academy will be able to head off the establishment of all sorts of group schemes of the nature referred to in your letter, because I am quite convinced that these schemes do not operate to the advantage of medicine, or the medical profession, or the public. I do believe that they are opposed to public policy."

That statement was based in part on personal statements made to me by Dr. Freiberg at the time of his visit to my office.

Q.—You say in the letter "Clinics of the kind described in your letter." *A.*—Yes, it was described in that letter.

Q.—And didn't he say: "It may be known to you that Dr. George H. Cook has been and is trying to organize a group clinic in Cincinnati on the identical plan of the Ross-Loos?" *A.*—He said that in the letter, but he told me other things personally.

Q.—So that there were other things mentioned which you did not incorporate in your letter? *A.*—No, nor did he say anything about them in his letter.

Q.—He didn't mention it in his letter and you didn't in yours? *A.*—No.

Q.—Now, isn't it true that in 1935 the American Medical Association adopted these ten principles— *A.*—I think it was 1934.

Q.—Well, 1934—to govern prepayment plans? *A.*—I didn't say to govern; they were principles believed to be useful for the guidance of those societies who wanted to start prepayment plans.

Q.—Isn't it also true that the principles that were adopted were to control, govern, all types of experimentation to provide medical care for persons in the low income group? *A.*—They were not to control anybody.

Q.—Were they designed to govern such plans? *A.*—They were designed for the guidance of those who wished to start such plans. The American Medical Association has never controlled anything. The state and county societies which have started these plans, sponsored them, have controlled them.

Q.—Do you recall a report of the Board of Trustees at the special session of 1935? *A.*—I recall that there was a special session; I believe in 1935.

Q.—In that report the following appeared, and I am referring to the last paragraph. *A.*—Let me see it. Yes, the word "govern" is used there, but it is not used in the sense of establishing control by the American Medical Association.

Q.—But the idea of the principle as adopted is that any prepayment plan should conform with the ten principles announced as of that date? *A.*—It was hoped that they would, but I insist that the word "govern" there is not used in the manner of establishing control by the American Medical Association.

Q.—But the Board of Trustees has said that these ten principles do govern such experiments? *A.*—It says that these principles did govern, but it is intended not in the sense in which you imply it.

Q.—Now, at least, I think you testified it was the intention of the House of Delegates on the whole that the plans would conform with these principles laid down in 1934. *A.*—I think it was the intention of the House of Delegates to adopt principles that would be helpful to state and county medical societies or, for that matter, other groups, in drawing plans for providing medical service for the low-income groups.

Q.—And it was hoped all plans would conform with these principles? *A.*—I suppose so, certainly; otherwise they wouldn't establish those principles if they didn't think they would be helpful.

Q.—And isn't it also true that the sixth principle—I believe it is—requires that any form of medical service should include within its scope all legally qualified doctors in the locality to be served by the plan? *A.*—I can't recall that.

Q.—It is the eighth; I show you on page 55, and ask you whether that is not the eighth principle. *A.*—It says "Any form of medical service should include within its scope all legally qualified doctors of medicine in the locality covered by its operation who wish to give service under the conditions established."

Q.—Yes, isn't it true that that means that any plan that doesn't permit all doctors of the local society to participate, if they desire to do so, violates the ten principles, one of the ten principles, adopted in 1934? *A.*—There was one of those principles that was changed.

Q.—That was the one on payment? *A.*—I don't recall.

Q.—But you don't recall No. 8 being changed? *A.*—I can't recall.

Q.—It was No. 6? *A.*—That is my recollection.

THE COURT:—Your question is directed to a specific principle, No. 8. Put another question.

By Mr. Kelleher:

Q.—Address your mind to No. 8, and tell us whether if a plan for providing medical service to low-income groups doesn't permit all members of the local society to participate in it, if they desire to do so, that plan doesn't violate one of the ten principles adopted in 1934? *A.*—I would have to read this whole business through to answer that question satisfactorily. In my opinion Section 8 of these principles expressed the opinion of the House of Delegates that in the formation of these plans by the Society they should include within their scope all legally qualified doctors of medicine in the locality covered by its operation who wish to give service under the conditions established. Now, I would have to read this carefully to—

Q.—Well, you are familiar with it, are you not; you saw it yesterday? *A.*—Mr. Kelleher, I have lots to do; I can't read these every day; and I would have to establish in my mind whether this was intended to apply to these plans believed necessary, and which were to be operated under the auspices of the Medical Society.

Q.—Isn't it a fact that the only plan that the American Medical Association would permit were those plans which conformed with the ten principles adopted at that session in 1934? *A.*—Mr. Kelleher, there are many plans in operation that the American Medical Association would not approve, but it is not a matter of their permission.

Q.—Is it not true that you would not approve any plan which did not conform with these principles? *A.*—I think not; I think they would not be approved by the American Medical Association, but the American Medical Association doesn't have to approve them.

Q.—But wouldn't you oppose any plan if it didn't conform with these principles? *A.*—I don't know that the American Medical Association would condemn it on the basis of being unethical for that reason; it might on the basis of its being an unsound plan. I can tell you this, though: I don't believe the American Medical Association would approve it if it involved control by a corporation.

Q.—I am not asking you that. I would now like to know if the American Medical Association would not oppose any plan to provide medical care to people of low income on a prepayment basis if such plan didn't permit all of the qualified physicians in the locality to be served to participate in the plan? *A.*—That is a question which would have to be determined on the basis of actual fact.

Q.—You are familiar with the various plans which have been adopted within the past few years? *A.*—I am familiar with some of them.

Q.—Some of those plans, like the Ross-Loos Clinic, do not permit all physicians in the locality served by the plan to participate, do they? *A.*—I don't think they do.

Q.—And therefore, isn't it true, that they do not comply with the general principles adopted in 1934 by the Association? *A.*—That depends entirely on whether those ten principles are for the guidance of the county and state societies who wanted to organize, alone, or generally.

Q.—But you weren't setting up standards for state and county societies which were more rigorous than the standards you applied to organizations not sponsored by such state and county societies, were you? *A.*—That would depend on the circumstances; I think you might reasonably expect, in some particulars, more of a medical society than of other groups.

Q.—Suppose you take a plan which involves group practice: that is a group of doctors who associate themselves together; and suppose that the plan offers medical care to people of low income on a prepayment basis. Does that plan conform to the principles of medical ethics of the American Medical Association, assuming that it is ethical in all other respects? *A.*—You have a long question there. Ask it again and I will try to answer it. Of course, it presupposes that a person who offers medical service is going to render good medical service. I think I know of men who are not particularly capable but who are quite ethical.

Q.—I want you to assume that this group offers the same type of service as does the Ross-Loos Clinic. *A.*—I would say that if that group was approved by the local county medical society and by the state medical association, the American Medical Association would not offer any opposition whatsoever.

Q.—Suppose, though, that the local medical society and the state medical society neither approved or disapproved?

Mr. Leahy:—What do you want to know?

Mr. Kelleher:—I want the answer to my question.

Mr. Lewin:—The question is perfectly clear.

The Witness:—It is not very clear to me.

Mr. Leahy:—I don't know what it is.

By Mr. Kelleher:

Q.—I will ask it again. Suppose that a group of doctors offer medical care to low income groups on a prepayment basis; suppose that the group is ethical in all other respects; suppose the doctors are qualified, and that the medical care offered is the same offered by the Ross-Loos Clinic, and suppose that the local medical society and the state medical society neither approve or disapprove of that plan. Is such a plan ethical?

Mr. Leahy:—Objected to as immaterial; a hypothetical question without any hypothesis in the evidence.

THE COURT:—You opened it up; you asked him about his opinion about the principles of ethics of the American Medical Association. Overruled.

Mr. Leahy:—Exception, your Honor.

The Witness:—I think no objection would be offered to it if it were not otherwise in conflict with the constitution, by-laws, ethics and traditions of the American Medical Association.

Q.—And such a plan would not be unethical, would it, because it didn't permit free choice of physicians? *A.*—Not necessarily, because the hospitals do not offer free choice of physicians in all particulars; neither do other groups.

Q.—And if in that plan the choice of the patient was limited to the doctors on the staff of the organization there would be no infractions of that section of the principles of medical ethics that require free choice of physicians? *A.*—Providing there was nothing else involved, and providing it was not disapproved or approved by the local society and the state society.

Q.—Now, let us get to the second matter; if the local society disapproves of that plan solely because it involves prepayment by a group of doctors, the American Medical Association would oppose the plan, would it not? *A.*—Not if I understand your question correctly; the answer is "No," but I am not sure I understand it.

Q.—I will try to clarify it. If the medical society, local society, disapproved of the plan which I have described, and disapproved for the sole reason the plan involved group practice on a prepayment basis, the American Medical Association would also disapprove of it, would it not? *A.*—The American Medical Association would not take any action unless it was officially brought to its attention, and action on the part of the American Medical Association requested.

Q.—Suppose it were officially brought to its attention? *A.*—There was more to my answer. It was officially brought to the attention and action was requested.

Q.—Let us suppose it were officially brought to its attention and action requested. *A.*—It would be referred to the Judicial Council.

Q.—Would not the American Medical Asociation oppose such a plan for that reason? *A.*—For what reason?

Q.—Because the local society disapproved of the plan. *A.*—Not necessarily, Mr. Kelleher. The American Medical Association might take no action whatever.

Q.—Even if invited in? *A.*—It might not make any decision in the case that would involve official action.

Q.—As a matter of fact, the American Medical Association was invited in, in connection with G. H. A., was it not? *A.*—The American Medical Association undertook to develop the facts about G. H. A. before it was ever invited to do anything; and G. H. A., if I may say so, is not at all—

Q.—Please confine yourself to my question, if you do not mind, Dr. West. The American Medical Association was asked to come into the G. H. A. matter, was it not? *A.*—The American Medical Association was requested by the District of Columbia Medical Society, through its representatives as a committee, to interest itself in this matter long after it had already interested itself in it.

Q.—Is it not also true that Dr. Verbrycke wrote Dr. Woodward and asked the American Medical Association to become interested in the matter? *A.*—He asked the Bureau of Legal Medicine and Legislation, I believe.

Q.—And as a result of that it was decided that Dr. Woodward should go to Washington, was it not? *A.*—I do not know, to my own knowledge. I cannot answer that definitely, but maybe so.

Q.—Did you hear Dr. Woodward's testimony? *A.*—I have heard lots of testimony. I cannot remember it all.

Q.—Do you not recall that he testified that after conferring with you it was decided that he should go to Washington? *A.*—If he did, that was actually so.

Q.—Is it not also true that you were interested in Group Health Association before the Medical Society of the District of Columbia became interested? *A.*—I think that is true, but I cannot produce any documentary evidence on that.

Q.—You think it is true? *A.*—I think it is true, and I said so, and I believe it.

Q.—Whatever you were doing in connection with Group Health Association you were doing to oppose Group Health Association, were you not? *A.*—I was doing it to develop the facts.

Q.—Yes; but were you not developing the facts and doing everything else— *A.*—Mr. Kelleher—

Q.—Let me finish my question—for the purpose of opposing Group Health Association? *A.*—It has long been the policy of the organized medical profession of the United States to oppose corporation practice, and this association happened to be a corporation engaged in the practice of medicine.

Q.—And therefore, as a matter of fact, you were opposed to it? *A.*—Personally, I certainly was.

Q.—Was not the American Medical Association opposed to it? *A.*—I think that it is contrary to the policy of the American Medical Association for a corporation to enter into the practice of medicine.

Q.—And therefore the American Medical Association and you were opposed to Group Health Association? *A.*—We were opposed to any corporation engaging in the practice of medicine.

Q.—Were you opposed to Group Health Association? *A.*—When we found out what the facts were, I was.

Q.—Was not the American Medical Association opposed to it? *A.*—I think it was entirely contrary to the policies of the American Medical Association.

Q.—And to the policies of the House of Delegates? *A.*—Yes, sir; I think so.

Q.—And whatever you did in connection with G. H. A. you did to oppose the growth of Group Health Association, did you not? *A.*—I don't know about opposing the growth. I opposed the principle of the Group Health Association.

Q.—And did you not desire to put a stop to its operation if you could? *A.*—I didn't do anything to stop it, but I did make my position known, and I expressed my opinion to the effect that it was a corporation practicing medicine and believed to be illegal, and I opposed it on that account.

Q.—Is it not also true that you and the American Medical Association did everything you could to combat G. H. A.? *A.*—Yes, to combat it in the sense that we did everything we could to develop the facts and make them known. Now, Mr. Kelleher, I never had one word of conversation with anybody in G. H. A. that I know of.

Q.—I am not suggesting that at all. *A.*—I think it is fair for me to say that if I had been going to actively oppose the actual organization of the thing I would have gone to them and opposed it.

Q.—How would you have done that? *A.*—By doing everything I could to persuade them that they were doing the wrong thing.

Q.—But there were other ways of opposing it. *A.*—Yes; and there were other ways to make the attitude of the American Medical Association known.

Q.—And it is also true that there were ways of affecting Group Health Association's growth through the local hospitals; is not that a fact? *A.*—So far as I know, the American Medical Association never attempted to control the action of any hospital with respect to Group Health Association.

Q.—Is not this true— *A.*—(Continuing) I never communicated with a Washington hospital in my life, so far as I know.

Q.—In the minutes of the Board of Trustees of November 18 and 19, 1937 appears the following:

"Dr. West reported that a committee of the Medical Society of the District of Columbia had visited the headquarters offices early in the month for the purpose of conferring with him, Dr. Woodward and Dr. Leland with respect to the Group Health Association, Inc.; that he had brought what apparently amounted to a demand to the Association to devise further means and ways of opposing the continued operation of Group Health Association, Inc., and that it was intimated that the American Medical Association had not concerned itself with anything but scientific matters, in spite of the fact that he and Dr. Woodward had conferred with the District Society in Washington on instructions from the board."

Is it true that in connection with G. H. A. you conferred with the District Society in Washington on instructions from the Board of Trustees of the American Medical Association? *A.*—I do not recall that I ever attended a meeting of the District Society during all the life of the Group Health Association.

Q.—Did you confer with representatives of the Society on instructions from the Board of Trustees? *A.*—No. I think Dr. Woodward and Dr. Leland conferred on instructions from the Board of Trustees.

Q.—Did you not say that you and Dr. Woodward did confer with the District Society on instructions from the Board of Trustees? *A.*—I don't recall the Board of Trustees giving Dr. Woodward and me any instructions to confer.

Q.—Would you say this is wrong? *A.*—Well, I don't know. I am not going to say it is wrong, but I do say that I don't recall it myself, that specific instructions were issued to Dr. Woodward and me at any one time.

Q.—You came here in July 1937 for the very purpose of consulting the representatives of the Society concerning G. H. A., did you not? *A.*—I came for that purpose among others, Mr. Kelleher.

Q.—If you were ordered by the— *A.*—As a matter of fact, if you will permit me to answer that question, my recollection is that—and I am not absolutely sure about it—that I was invited to confer with them after I got here. I can't be sure about that, but that is my recollection.

Q.—If you said in November 1937 that you had gone to Washington as a result of instructions from the Board of Trustees, don't you think that was correct? *A.*—I would have to see the preceding minutes of the Board of Trustees to know if I had had instructions.

Q.—You saw them this morning. Do you not recall that you were shown— *A.*—My dear man, I saw an extract from the minutes this morning, a digest of the minutes. I didn't see all the minutes.

Q.—I think you have told us that you and the American Medical Association were opposed to G. H. A., did you not? *A.*—I said I was opposed to the principle of the thing, and I thought it was not in keeping with the policies of the American Medical Association.

THE COURT:—You have been all over that.

Mr. Kelleher:—I was just leading up to something else, your Honor.

By Mr. Kelleher:

Q.—Is it not true that the American Medical Association was opposed to G. H. A. because, in its view, G. H. A. was unethical? *A.*—Mr. Kelleher, I have already stated that the American Medical Association was opposed to G. H. A. because it was a corporation engaged in the practice of medicine, and it was believed to be illegal and it had been so decided in many instances.

Q.—And was it not opposed, therefore, because it was unethical for a doctor to associate himself with that association? *A.*—I will give you my personal opinion. I think it would be unethical for a physician to engage himself with an illegal corporation of any kind.

Q.—And you felt that way in 1937? *A.*—I felt that way all my life.

Q.—And you felt that way in 1937 concerning Group Health? *A.*—I feel that way today.

Q.—And you felt that way in 1937? *A.*—All my life.

Q.—Did you not know that if the local society had the same view that you had, that G. H. A. was unethical, that a doctor, a member of the Society, associating himself with G. H. A. would be subject to disciplinary proceedings by the local society? *A.*—If that local society wanted to institute procedings, yes. But, Mr. Kelleher, I must insist—and I hope it is not out of the way for me to do so—that the American Medical Association has no jurisdiction over membership of local societies.

THE COURT:—I thought we had been all over that.

The Witness:—And it does not attempt to exercise it.

THE COURT:—We have been over that. Do not pursue it any further. I would rather not get back to that.

Mr. Kelleher:—All right, your Honor.

By Mr. Kelleher:

Q.—Did you not believe in 1937 that any member of the local society who became associated with Group Health Association would be subject to disciplinary proceedings by the Medical Society of the District of Columbia?

Mr. Richardson:—Objected to as repetitious.

Mr. Kelleher:—No, it is not.

Mr. Richardson:—Word for word.

THE COURT:—He has answered that question. Put another question. Objection sustained.

By Mr. Kelleher:

Q.—On October 29 you wrote the local society notifying them that Drs. Lee and Scandiffio were on the staff of G. H. A., did you not? *A.*—I don't know whether it was October 29 or not. I wrote them and told them that I had that information.

Q.—You learned that from Mr. Hayes, did you not? *A.*—My recollection is that either I or somebody at our office received a telegram from Mr. Hayes giving the names of those who had been announced as members of the staff of G. H. A.

Q.—And on the same day you wrote a letter to the Society notifying the Society that two of its members were on the staff of G. H. A., did you not? *A.*—I don't know whether it was the same day or not. I do remember writing a letter in which I stated that two members of the staff were members of the District of Columbia Society, and that one, I believe, was a member and Fellow of the American Medical Association.

Q.—And a few days later, at the November 6 conference, you learned that the Society had instituted disciplinary proceedings against Drs. Lee and Scandiffio? *A.*—I learned—I don't know whether it was a few days later or not, but some time later I learned through a newspaper statement.

Q.—Did you not hear about it at this November 6 conference, through Dr. Hooe? *A.*—I believe it was mentioned; yes.

Q.—Dr. Hooe explained that two members had been cited by the C. C. and I. M. committee; do you recall that? *A.*—I think I probably had information before that conference.

Q.—You had heard it before that? *A.*—I do not know about its being a few days after I wrote that letter.

Q.—Were you surprised to hear that these two doctors about whom you had written on October 29 were now cited by the C. C. and I. M. committee?

Mr. Leahy:—I object as immaterial, if your Honor please, whether he was surprised or not.

THE COURT:—Objection sustained.

By Mr. Kelleher:

Q.—Did you not expect, when you notified the Society on October 29 that two of its members were on the staff of G. H. A., that that Society would institute proceedings against those two doctors? *A.*—Mr. Kelleher, I didn't notify the Society. I informed the Society that that was the information I had.

Q.—And when you so informed the Society did you not believe then that proceedings would be instituted by that society? *A.*—I didn't think about whether they would be or not. If you are trying to make the implication that I wrote that letter for the purpose of inciting action by the Society, you are altogether wrong.

Q.—Why did you give the Society that information? *A.*—Just as a matter of interest.

Q.—Purely casually? *A.*—If I were to get a telegram announcing that certain doctors had been appointed on any commission by the United States Government, as a matter of interest I would look to see if they were members of the American Medical Association or not.

Q.—All right. As a matter of fact, Dr. Scandiffio was expelled from the Society, was he not? *A.*—So I am informed.

Q.—Did you not also, in response to a request from the Harris County Society, advise that Society that in your opinion if any member of that Society were associated with Group Health Association that was unethical conduct? *A.*—I don't know whether I wrote such a thing or not. If you have a letter there I should be glad to look at it.

Mr. Lewin:—It was shown the witness this morning.

By Mr. Kelleher:

Q.—Dr. West, did not Dr. Talley write you and ask you what the view of the National Association was concerning the ethics of any member of the Association affiliating himself with G. H. A.? *A.*—Dr. Talley—who is he?

Q.—Chairman of the Board of Censors of the Harris County Medical Society. *A.*—Here is a letter from him, yes, in which he says:

"We would appreciate a letter from you stating the view held by the National Association with reference to practice of this type."

Q.—And he was referring to Group Health Association, was he not?

THE COURT:—What exhibit is that?

Mr. Kelleher:—No. 124, your Honor.

A.—Yes. He says,

"so-called Group Health Association made up of Federal employees of the H. O. L. C. located in Washington, D. C."

By Mr. Kelleher:

Q.—Did you not reply that that organization constituted a violation of the principles of medical ethics? *A.*—I will have to read this letter to find out.

Q.—Let me help you on it.

THE COURT:—What letter is that?

Mr. Kelleher:—No. 123, your Honor.

By Mr. Kelleher:

Q.—Read the last two sentences in the third paragraph.

A.—

"Based on the information available to us here, it is my purely personal opinion that a physician who becomes an agent of a corporation engaged in the practice of medicine violates the principles of medical ethics. This, my personal opinion, is offered of course for whatever you may consider it to be worth."

Q.—Your opinion, then, as of February 1938, was that if any doctor affiliated with Group Health Association, he violated the principles of medical ethics? *A.*—I think if—

Q.—Just a second, Dr. West. Please answer my question. I want to be perfectly fair to you.

Mr. Lewin:—Let him answer it yes or no and then give his explanation.

Mr. Leahy:—Put the question again, if you want yes or no.

THE COURT:—You gentlemen settle it among yourselves.

Mr. Kelleher:—Will you read my question, please?

(The pending question was read by the reporter as above recorded.)

By Mr. Kelleher:

Q.—What is the answer to that question? *A.*—My answer is that I think any doctor who sells his services to a corporation engaged in the practice of medicine violates medical ethics.

Q.—Then is your answer in the affirmative? *A.*—As particularly applied to the Group Health Association?

Q.—Yes. *A.*—Yes.

RE-DIRECT EXAMINATION

By Mr. Leahy:

Q.—What control, so far as medical ethics of the American Medical Association are concerned, does the American Medical Association exercise over the County or State associations?

Mr. Lewin:—Objected to as repetitive.

Mr. Kelleher:—And also as argumentative.

Mr. Leahy:—Oh, no.

Mr. Kelleher:—And beyond the scope of the cross examination.

THE COURT:—I think that was gone fully into on direct examination and on cross, too. Objection sustained.

Mr. Leahy:—I am sorry. I did not mean to repeat. I thought it was just developed on the cross examination.

THE COURT:—I am sure it has been gone into.

By Mr. Leahy:

Q.—Doctor, with reference to the Dr. Cooke letter about which you were asked, with reference to the Cincinnati group, did you receive information from Dr. Cooke personally? *A.*—No, sir; not that I recall.

Q.—Did you receive information from anybody with reference to the Dr. Cooke clinic? *A.*—I had a visit, and my recollection is that I had at least two telephone calls from Dr. Frieberg who later wrote me. I believe perhaps one of those calls was in between the two letters that he wrote me, in which he gave me some information that was not contained in the letters, which, in my opinion, indicated that the proposed plan was not—

THE COURT:—This has all been gone over.

Mr. Leahy:—No, your Honor.

THE COURT:—You went into it very thoroughly, on the letters themselves.

Mr. Leahy:—It is not mentioned in the letters, if your Honor please. It was just brought out on cross examination.

THE COURT:—In taking up the letters you also took up the facts that there were telephone conversations or a conference. It has been thoroughly inquired into, I think, by both sides. What is the point of it?

Mr. Leahy:—I think it was on cross examination, if your Honor please; it was just developed by Mr. Kelleher.

THE COURT:—Read the question, Mr. Reporter.

(The question referred to was read by the reporter as above recorded.)

Mr. Leahy:—He received information, and then Mr. Kelleher developed on cross examination that over and beyond that—

THE COURT:—You may inquire about it. I have not time to look it up now.

The Witness:—I did; through a visit from Dr. Frieberg and through, I think, two telephone messages, and I have an indistinct recollection that some one else either wrote to me about it or talked to me about it; but that I cannot testify to definitely.

By Mr. Leahy:

Q.—From information of that character received with reference to it, was there a distinction between the Ross-Loos clinic and the Dr. Cooke clinic as proposed? *A.*—My recollection is that the plan proposed to be put into operation in Cincinnati went considerably beyond most plans, and I do distinctly recall that I was informed that it would involve solicitation of patients and advertising, open advertising.

Q.—Now, with reference to one question and answer—and I am not clear about it—you made the statement that you had been opposed all your life to a doctor's being connected with an illegal enterprise. Do you recall that testimony? *A.*—I said that I had been opposed all my life, certainly all my medical life, to a doctor selling his services to a corporation engaged in the practice of medicine. I stick to that statement.

Q.—With reference to the G. H. A., somewhere in your answer you said something which appeared to be confusing, as to whether you had been opposed to G. H. A. or whether you were opposed to a doctor engaging himself in an enterprise which was thought to be illegal. *A.*—I was opposed to G. H. A. as a corporation just as I was opposed to any other corporation engaging in the practice of medicine.

RE-CROSS EXAMINATION

By Mr. Kelleher:

Q.—Were you not opposed to the Ross-Loos clinic because it was a partnership? *A.*—No.

Q.—You were not? *A.*—No.

Q.—Let me read you this and ask you whether this is correct. It is from Exhibit 141:

"I am sorry indeed to know that anybody in Cincinnati is preparing to begin operations of a plan made more or less famous, or infamous, according to the point of view, by Drs. Ross and Loos in Los Angeles. I am quite convinced that the Ross-Loos scheme is a violation of the principles laid down by the courts of California which have repeatedly insisted that the corporate practice of medicine is illegal in that state. I am just as strongly convinced that it is relatively easy to evade the law. What is in effect a corporation may be organized under the designation of partnership."

Is that correct? *A.*—That is correct.

Q.—And did that represent your view? *A.*—If you will let me answer, Mr. Kelleher—

THE COURT:—Give the witness a chance.

Mr. Kelleher:—All right, your Honor.

The Witness:—That is correct, because at that particular time I had the understanding that it was a corporation. Now, then, the other part of your question there—if you will be good enough to restate it I will try to answer it.

THE COURT:—The question is whether, if it changed its form to partnership, you would still be opposed to it if it carried on the same way.

The Witness:—My view with respect to it, based on the fact that a corporation that had been engaged in the practice of medicine in Illinois had lately been declared to be illegal and immediately got around that court decision by organizing as a partnership—

By Mr. Kelleher:

Q.—Will you answer the Court's question, please?

THE COURT:—It was not my question.

Mr. Kelleher:—Your suggestion, I mean. Will you read it, Mr. Reporter?

(The question referred to was read by the reporter as above recorded.)

The Witness:—Not necessarily; no.

By Mr. Kelleher:

Q.—Were you opposed to the Ross-Loos clinic even if it was a partnership? *A.*—I was at that particular time, when I was informed that it was a corporation.

Q.—Does this say you were informed it was a corporation? *A.*—No; it does not. I cannot put into every letter I write everything I know and all the information I have.

Q.—Did you not put into that letter that although the Ross-Loos clinic was a partnership, you felt it was evading the law? *A.*—That is not what I said.

Q.—Look at that letter and tell us whether there is anything to show that you thought that the Ross-Loos clinic was a corporation? *A.*—I said, "I am just as strongly convinced that it is relatively easy to evade the law. What is in effect a corporation may be disguised under the designation of a partnership."

Q.—And did you not view the Ross-Loos clinic as a partnership, but, nevertheless, say it was illegal? *A.*—No; I didn't think it was illegal as a partnership, because I know of corporations that have been declared illegal and that have established themselves as partnerships and are not declared illegal.

Q.—Did you not say, "I am quite convinced that the Ross-Loos clinic is in violation of the principles laid down by the courts of California"? *A.*—I objected because I thought it was a corporation. I explained that three times.

Mr. Leahy:—Objected to as repetition.

By Mr. Kelleher:

Q.—You have explained it three times? *A.*—Yes.

Q.—Even though it was a partnership? *A.*—I don't know what you mean by "even though it was a partnership."

(To be continued)

CHARGE TO THE JURY

ASSOCIATE JUSTICE JAMES M. PROCTOR

THE COURT:—Members of the jury, counsel for the respective parties have submitted to the court many so-called prayers which are simply written requests to the Court to instruct the jury in particular matters on the law applicable to the case. Those prayers have been considered and quite a list have been granted by the Court as correct statements of the law. It will be necessary for me to read them to you. First, I will deal with the prayers in behalf of the Government.

The burden of proving the defendants guilty is on the Government. This does not mean, however, that the Government's proof must establish the defendants' guilt to an absolute certainty. You may find the defendants guilty, if you are convinced beyond a reasonable doubt of all the essential facts necessary to establish the guilt of the defendants.

A reasonable doubt must be real and not imaginary. It must be an honest and substantial misgiving for which a good reason may be given, based on the nature of the evidence or lack of evidence in the case. If all the evidence in the case, impartially and reasonably considered, produces in your minds a settled conviction or belief of the defendants' guilt—such an abiding conviction as you would be willing to act on in the most important affairs of your own life—you may be said to be free from any reasonable doubt and should find a verdict in accordance with that conviction.

In considering the testimony, you should, as to each witness, consider his demeanor and manner of testifying, his interest, if any, in the result of the trial, any temptation to testify falsely, his opportunity to know the facts, the probability or improbability of the testimony given, and all other like circumstances appearing from the evidence; and from all these you should determine the weight and credit to be given to the testimony of the witness. If you believe that any witness has wilfully testified falsely to a material fact, you may disregard all the testimony of that witness or give credit to such part thereof as you deem it warrants.

The fact that the defendants may have believed Group Health illegal is not material to the case. A mistake of law will not excuse a violation of the Sherman Act. The fact that the defendants may have had an honest and reasonable belief that Group Health Association was operating illegally would not constitute any justification to violate the law. If you find the defendants were engaged in a combination as charged, it is unnecessary for you to decide whether Group Health Association or its staff may have violated the principles of medical ethics of the American Medical Association, if such were the fact. It is immaterial that Group Health Association may have employed doctors on a contract basis or that the members of Group Health Association may not have had complete freedom of choice of physicians from the entire body of doctors practicing in the District of Columbia or that Group Health Association or its organizers may have solicited Government employees to join Group Health Association. It is likewise immaterial to the issues which you must decide that the defendants may have believed that Group Health Association or the members of its medical staff violated the Principles of Medical Ethics of the American Medical Association.

If you find that the defendants were engaged in a combination as charged, it is unnecessary for you to decide whether the medical care given by the medical staff of Group Health Association was equal to, superior to or inferior to the quality of medical care rendered by doctors engaged in private practice. That is immaterial to the issues in the case.

If you find that the defendants were engaged in a combination as alleged, it is unnecessary to decide whether Group Health Association was financially sound. The financial condition of Group Health Association and the sources of its financial support during the period of the conspiracy are immaterial to the issues in this case. It is also immaterial that the defendants may have believed that Group Health Association was financially unsound or that it was subsidized by other organizations.

The Sherman Act prohibits combinations unreasonably in restraint of trade. This prohibition extends to undue restraints on the furnishing of medical service to the public. If you find that the defendants conspired together for the purposes charged and employed the means charged, and if you find that the defendants, in seeking to achieve those purposes, intended to prevent Group Health Association from competing with doctors engaged in private practice on a fee-for-service basis in furnishing medical care to members of the public eligible for membership in Group Health Association, then the defendants were engaged in a combination in restraint of trade.

If you find a conspiracy to exist, all acts and declarations, oral or written, of each party to the conspiracy, in furtherance of the objects, may be considered as evidence against all the parties to the conspiracy. This is true even though the party doing such act or making such declaration is not on trial or is not named in the indictment as a defendant. That is, every person who, knowing of the conspiracy, does any act or makes any statement intended to further the objects thereof, does thereby become a party to the unlawful conspiracy.

It is not necessary that all the parties to a conspiracy shall actually meet together at one and the same time and place, or that all discuss its purposes or the means of carrying out its objectives, or whether each party knows all the others. Nor do you need to find that all combined together at the start of the conspiracy. If it is shown that the conspiracy was entered into between two or more of the defendants and that at any later time during its existence new or additional parties, while

aware of its existence, united with them for the purpose of aiding in the accomplishment of the scheme, they would then become conspirators too and responsible for the consequences thereof.

In determining whether a conspiracy exists it is not necessary to find there was a written or formal agreement among the defendants or that any participant was bound to another to perform any particular portion thereof. It is sufficient if you find from the evidence that the defendants were voluntarily acting together, however informally, in order to carry out the common objective. Notwithstanding the fact that all the defendants are charged to have participated in the offense, it is not necessary for the Government to prove that all did so, and you are not required to find all guilty. If you find that the offense charged was in fact committed and that some of the defendants on trial were parties to it, you may convict those whom you so find guilty and acquit the others.

That completes the reading of the instructions on behalf of the Government.

These are instructions granted at the request of the defendants:

The defendants and each of them are presumed to be innocent of the crime charged to them and each of them in the indictment. This presumption surrounds and remains with each throughout the entire trial and should be considered by you in determining the guilt or innocence of each.

Before a verdict of guilty can be returned against the defendants or any of them, the evidence of the Government must not merely indicate guilt but it must be inconsistent with any rational theory of innocence. Thus, if the jury finds from the evidence what the defendants did is just as consistent with innocence as with guilt, then the verdict must be Not Guilty as to those defendants.

The defendants had the lawful right to combine and form corporations and associations for the improvement of the practice of their profession and to advance their interests. They had the right to make reasonable rules and regulations respecting their profession and to ascertain the qualifications and character of their members. They had the right to discipline members who failed to abide by the regulations or rules adopted by the associations in the formation thereof and to suspend or expel from membership any member who failed to abide by the rules and regulations. The fact that the defendants adopted such rules and regulations and disciplined members does not of itself constitute an unlawful combination in violation of the statute. They must have combined together with the intent to injure, obstruct or restrain trade, or they must have intended to do acts the necessary effect of which would be to injure, obstruct or restrain trade.

The individual defendants as physicians had a right to determine with what other physicians they would consult, and their refusal to consult with any particular physician is not of itself illegal.

Physicians have the right to select the hospital in which they choose to treat and operate on their patients; and the refusal of a physician to do business with any hospital because of the composition of its courtesy staff is not of itself illegal.

The defendants American Medical Association and Medical Society of the District of Columbia have the right to adopt rules for just and fair dealing among their members and the right of enforcement of those rules and regulations by such reasonable penalties as they may provide for violation thereof.

The defendants had the right to reach and attempt to reach their objective of advancing the interests of the medical profession by legitimate persuasion and reasoned argument, and to this end they had the right to tell their side of the story and to persuade others, including the Washington hospitals, other physicians, members of Group Health Association, Inc., and the public to utilize and use the defendants' method of practicing medicine, and to use peaceful persuasion, publicity, articles in the press, in publications of defendants, including THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, and all lawful propaganda to have their methods of practicing medicine prevail over those of Group Health Association.

The defendants had the right to write letters or other statements among themselves or to other members of the profession or to the public generally, expressing disapproval of or opposition to Group Health Association and the form of medical service offered by it.

The defendants were entitled, through legitimate persuasion and reasoned argument, to endeavor to support and advance the interests and extension of that type of medical practice believed by the defendants to be in the public interest, without regard to whether such acts hindered Group Health Association, its doctors, members or operations, or any other type or method of medical practice. If they did not go further to conspire to restrain Group Health Association there would be no offense.

I charge you that the defendants have the lawful right, through action taken in their meetings and conferences, to formulate and adopt rules of medical ethics for the control and government of themselves and the members of their societies in the practice of their profession, and the support and maintenance of such principles of medical ethics by legitimate persuasion and reasoned argument or by enforcement of Society rules, laws and regulations, without more, would not constitute unreasonable restraints against Group Health Association, its doctors or members.

Any doctor who voluntarily joined the defendant medical societies was required to comply with the constitution, rules and regulations thereof. No doctor would have the right, as against the wishes of the particular society, to retain membership therein regardless of how valuable or advantageous such membership might be to him, and at the same time wilfully violate any provision of its constitution, rules or regulations.

If a doctor desires to retain membership he is bound to obey the constitution, rules and regulations, since membership therein is entirely voluntary; and if, as a result of his nonobservance, he suffers discipline and possible expulsion from the society, any injury, damage or restraint thus suffered by him or by any corporation by which he might have been employed would, without more, not constitute a violation of the statute.

The Washington hospitals are private institutions under private management and control, and the lawful authority to constitute the medical staffs of such hospitals is vested in the governing board thereof. Hospitals have a lawful right to make such reasonable rules and regulations for the operation of the hospitals as to the authorities thereof may seem in their best interests. They are lawfully entitled to require obedience to such rules and regulations by all persons dealing with said hospitals, including doctors permitted by the hospitals to practice their profession therein.

The Washington hospitals had the lawful right, if they so desired, to adopt and enact a rule confining their medical staffs to members of the local medical societies, and any restraint resulting thereby to Group Health Association, its doctors, members or operations, would not in itself be a violation of the Sherman Act.

A member of the medical profession duly authorized by law to practice his profession in the District of Columbia is not by reason thereof entitled to practice in any of the private Washington hospitals. Permission to practice in such a hospital is not a right on the part of an applicant doctor but is only a privilege which can be extended or withheld from him at the will of, or in the discretion of, the particular hospital.

If the Washington hospitals or any of them believed that it was in the best interests of such hospital to adopt and enforce a rule confining appointments to the medical staff to members in good standing of local medical societies any such hospital had a lawful right to adopt and enforce such rule, and any resulting injury or restraint occasioned thereby to a particular doctor or other person would not be a violation of the statute.

The defendant American Medical Association had the lawful right, on request of a hospital, to inspect it for the purpose of approving or disapproving it for intern or resident training, and it had a lawful right to approve or disapprove such hospital based on the inspection so made.

The American Medical Association was lawfully entitled to present for the consideration of the hospitals inspected the so-called Mundt Resolution concerning the selection of medical staffs exclusively from the members of local medical societies, and such action on the part of the American Medical Association would not of itself constitute an act of coercion as charged in the indictment.

Where the evidence in the case is in whole or in part circumstantial in its nature, the circumstances relied on by the government to establish the guilt of the defendants must so distinctly indicate the guilt as to leave no reasonable explanation consistent with innocence.

Facts which give rise to a reasonable and just inference that a conspiracy existed do not necessarily exclude every other reasonable hypothesis, unless it can be said that only one just and reasonable inference may be drawn from the given state of facts.

The Medical Society of the District of Columbia is shown by the evidence to have been a component and constituent society and member of the American Medical Association. As such it was entitled to contact, communicate and advise with the officers and representatives of the American Medical Association with reference to matters affecting or relating to the practice of medicine, and such intercourse between the societies is not a violation of the Sherman Act.

If the defendants had objections to Group Health Association and the type of medical practice proposed by it, and believed that the system of medical practice approved by the defendants was better and more in the public interest, then the defendants were lawfully entitled, either individually or collectively, through legitimate persuasion and reasoned argument, either publicly or privately, to urge any and all persons to come to the support of the objectives of the defendants and to disapprove the objectives of Group Health Association, and any resulting restraint, injury or damage to Group Health Association, its doctors, members or operations is not in violation of the law.

The defendant Woodward had a lawful right to prepare an article or a memorandum disapproving Group Health Association and matters relevant thereto, and to cause the same to be published by the American Medical Association in THE JOURNAL, and to do so, without more, would not be a violation of the Act on the part of Woodward or the American Medical Association.

The defendant Fishbein, the Editor of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, had a lawful right to publish in THE JOURNAL objections to Group Health Association and its proposed methods of medical practice; and such publication of articles criticizing Group Health and its plan for medical service, even though it may have restrained or injured Group Health Association, its doctors or members, standing alone and without more, would not make Fishbein guilty of a violation of the act.

The American Medical Association and its officers had the lawful right to receive and answer inquiries concerning various so-called contract medicine plans, and the American Medical Association and its officers; in answering such inquiries, were lawfully entitled to state their own conclusions and beliefs with respect thereto, whether favorable or otherwise, and by so doing, without more, the American Medical Association and its officers would not violate the statute.

Evidence has been admitted tending to show the size and scope of the activities of the American Medical Association. Such fact does not raise any inference of wrongdoing or guilty conduct. Whether the American Medical Association is a large corporation or a small corporation does not affect its lawful right under the law; and the evidence is admitted here only for the purpose of showing the possible power, if any, of such corporation to induce and further the alleged illegal conspiracy set forth in the indictment.

A defendant does not become a party to a criminal conspiracy simply because he is a member of an association which might so conspire, or because he attends meetings of such organization where such conspiracy may be discussed, nor does he become a party to such conspiracy because he has knowledge of its existence or because he may even approve such conspiracy and its unlawful purpose. Before he can be found to be a member of a conspiracy it must appear that he knowingly and intentionally participated therein with the purpose and intention of aiding and furthering it; and you must find, before you can convict such defendant, that such intent existed beyond a reasonable doubt.

It is not unlawful to conspire and combine to effectuate a lawful purpose by lawful means. The defendants could lawfully combine to protect and support their medical organizations, their methods of professional practice, and the principles of medical ethics, by legitimate persuasion and reasoned argument or by any other lawful means.

There is nothing illegal of itself in enacting the so-called Mundt Resolution. The question is whether such resolution was intentionally used in order to aid in the carrying out of an illegal conspiracy on the part of the defendants. Nor would the fact that the Mundt Resolution was called to the attention of the Washington hospitals, in order to further the wishes of the American Medical Association in carrying out its purpose, be either improper or unlawful, unless you also find beyond a reasonable doubt, that such acts were intentionally done to aid an illegal conspiracy then and there existing in the District of Columbia.

That, ladies and gentlemen, completes the reading of the instructions which were requested by counsel and granted by the court.

And now may I, at the risk of some repetition, in my own way briefly outline the case to you and summarize some phases of the law which I deem important to guide you in your consideration?

The act of Congress under which the indictment is brought makes illegal and punishable every combination or conspiracy in restraint of trade in the District of Columbia. The practice of medicine and the operation of hospitals and organizations to provide for medical care fall within the term trade as used in the act.

The indictment charges a violation of the statute by the corporations, associations and individuals named in article I thereof. You will have the indictment. It will inform you with particularity of the names of all the defendants and of the offense with which they are charged.

The case has terminated as to Thomas Allen Groover by reason of his death, and as to Harris County Medical Society, Washington Academy of Surgery, Leon Alphonse Martel and Joseph Rogers Young by the verdicts rendered at my direction.

For brevity, I shall refer to the American Medical Association as the American Association; the Medical Society of the District of Columbia as the District Society; and Group Health Association, Inc., as Group Health.

It is the duty of the court to state the law of a case to the jury, and the duty of the jury to accept and follow the law as it is given by the court. This, I am sure, you will do.

The indictment, and the action of the Grand Jury in returning the same, are no evidence of guilt. The defendants are not called on to prove their innocence. They are presumed to be innocent and that presumption abides with them as a shield against conviction until and unless in your final judgment the evidence establishes guilt beyond a reasonable doubt. Therefore, the burden rests on the Government to prove guilt according to the charge laid in the indictment.

What is reasonable doubt, as that term is used in the trial of a criminal case? It is a doubt based on reason; such a doubt as after a full and fair consideration of all the evidence will leave a juror so undecided as that he cannot conscientiously say he has an abiding conviction of guilt, that is, a settled conviction; which he feels will abide with him in the future, so that if, perchance, his thoughts recur to his action in joining with his fellow jurors in a verdict of guilty, he will, in his own reflections, be justified in mind and conscience that he did the righteous thing.

Although proof beyond a reasonable doubt is necessary, that does not imply proof beyond all doubt and to an absolute certainty. Yet as a fair shield of protection to one accused of crime, the law does insist that before he shall be deprived of his good name and suffer the penalties of a criminal conviction his guilt shall be established by a measure of proof which leaves no reasonable doubt. The evidence must exclude any rational theory of innocence and admit only of an abiding belief in guilt. Hence, if an inference may be fairly drawn, as consistent with innocence as with guilt, a reasonable doubt would necessarily prevail. This is especially so in dealing with evidence of a circumstantial nature. Where such evidence is relied on to prove essential elements of the charge, it must so clearly point to guilt as to exclude any rational theory of innocence.

Here in the case at bar the charge is that the defendants conspired to restrain trade in certain specified ways. A conspiracy takes form when two or more persons combine to do an unlawful thing or to accomplish something of a lawful nature by unlawful means. Where such an agreement or understanding, however informal, is reached, all those who join therein become parties to the conspiracy. The object or the means to attain it must be illegal. There can be no criminal combination where both the object and the means are lawful. It is not essential that all details to carry out the plan be specifically arranged, or the particular acts of each be definitely assigned. It is enough if there has been a meeting of minds for concerted action to gain the common end. All need not know each other or meet together at any one time; nor need all combine at the start of the conspiracy. If two or more have done so, others with knowledge thereof may become participants at future times, while the conspiracy still continues, by uniting in the common design with the purpose to lend their encouragement and support to accomplish the same. On thus joining a conspiracy they render themselves liable not only for their own overt acts but for those of other members to the enterprise.

Hence it is not necessary that all defendants take part in the unlawful acts charged in furtherance of the conspiracy or to know about the same. One may also be liable for an overt act, though actually performed by another, if he knowingly instigates or supports the same by advising, encouraging or abetting it. So, if the alleged conspiracy is found from the evidence to exist, the acts and declarations of each party, shown to be a conspirator, in furtherance thereof, may be considered by the jury in determining the guilt of others who are accused.

However, you will understand that guilt does not attach to one who merely knows of a conspiracy or of acts in furtherance thereof, even though done in his presence. A passive knowledge or attitude is not enough. There must be actual and conscious union with the criminal group. Therefore, membership in the defendant medical societies; presence at their meetings; knowledge of an unlawful plan or purpose among other members, if such there be, would not alone make one a participant. Besides such knowledge there must be the positive intention to give adherence and support to the criminal scheme. Those are brief statements of some rules of law of a general nature to be applied in your consideration of the case.

The indictment itself is very long. That, as you know, is a formal accusation of crime. Much of it is devoted to allegations descriptive of the defendants, as also of the Washington hospitals and Group Health. There are extensive allegations of acts done to effectuate the objects of the alleged conspiracy. All these matters have been frequently referred to during the trial, including the arguments of counsel, and need not be stated again in any detail.

An essential part of the indictment, important to understand, is that which specifically charges a violation of the Statute. In substance it is alleged that the defendants conspired:

1. To restrain Group Health in its business of providing medical and hospital care to its members and their dependants on a risk sharing prepayment basis;

2. To restrain doctors on the staff of Group Health in pursuit of their calling;

3. To restrain other doctors in the District of Columbia in the pursuit of their calling, and

4. To restrain the Washington hospitals in the business of operating such hospitals.

It is further alleged that the plan and purpose of the conspiracy was:

To hinder and obstruct Group Health in procuring and retaining qualified doctors and those doctors from consulting with other doctors and specialists practicing in the District by threatening with disciplinary action members of the District Society who should become members of the staff of Group Health or who should consult with members of that staff. Further, it is alleged the plan and purpose was to hinder and obstruct Group Health in obtaining access to hospital facilities for its members, and the doctors of Group Health from treating their patients in the hospitals.

These purposes, it is alleged, were to be attained by certain coercive measures against the hospitals and doctors designed to interfere with employment of doctors by Group Health and use of the hospitals by members of its medical staff and their patients. The plan is fully detailed in the indictment and has been referred to by Government counsel in their arguments.

To sustain that charge the Government must prove beyond a reasonable doubt that a conspiracy did in fact exist to restrain trade in the District in at least one of the several ways alleged, and according to the particular purpose and plan set forth. If the evidence fails to convince you of that basic element the charge will necessarily fall with resultant acquittal of all defendants. If you find that fact established, then you will consider the evidence in particular relation to each defendant, to determine whether it does prove beyond a reasonable doubt that such defendant was a party to the conspiracy. If you do so find, then that defendant should be convicted, but if a reasonable doubt of guilt prevails you will acquit.

The opposing contentions may be roughly stated as follows:

The Government claims that the evidence proves the medical societies were opposed to Group Health and its plan of group medical care on a fixed prepayment basis; that they feared competition by that method of practice as against the fee for service method of organized physicians; that to obstruct and destroy such competition the medical societies, with certain officers and members and the hospitals, conspired to prevent successful operation of Group Health's plan by imposing restraints on physicians affiliated with Group Health, through threats of disciplinary action and expulsion; by denying them professional contacts and consultations with other physicians, and by means of the societies' power, coercing the hospitals to deny Group Health doctors facilities for treatment of their patients. The plan, it is contended, was carried out by enforcing compliance with the so-called Mundt Resolution of the American Association, the amendment of March 1937 to section 5 of the District Society's constitution, implemented by the "White List" and aided by corporate and individual acts of defendants.

On the other hand, the defendants insist there was no conspiracy; hence, no conspirators; that there was no purpose or plan to restrain Group Health, the hospitals or doctors; that their acts were intended only to oppose Group Health by legitimate argument and persuasion; that no coercion was practiced or intended against the hospitals, and that the "White List" and disciplinary proceedings against members of the District Society represented reasonable action taken by authority of their constitution and rules to protect the organization and its standards of medical practice. Therefore it is claimed, in behalf of the defendants, that if those actions did interfere with Group Health and its doctors the effect was but an incidental and indirect result of acts taken legally and in good faith for legitimate ends and therefore were not wrongful or illegal.

If you believe the contention of the Government is established beyond a reasonable doubt, then the conspiracy is made out; whereas, if the contention of defendants prevails, the charge would altogether fail.

In the light of these contentions and the arguments supporting them, you will review the evidence fully and impartially to determine whether it does prove beyond a reasonable doubt the charge laid in the indictment.

Was there a conspiracy to restrain trade in one or more of the ways alleged? If so,

Who of the present defendants were parties to the conspiracy? All; or some; or none? To decide that question you will need to examine the evidence independently as it relates to each defendant. As to the corporate defendants, they would be responsible if authorized officers, acting for or in the name of the corporation, did acts within the apparent scope of the corporate powers, in forming or furthering the alleged conspiracy.

Did there exist the criminal intent? That is, was there a purpose and plan as charged? That would be so if in fact the positive intent to restrain prevailed, or there was a purpose to do acts the natural and probable effect of which would be to impose any of the restraints alleged. Another and different purpose would not suffice, even if wrongful, for the Government must prove the charge as laid—not some other offense.

If it be true, as defendants claim, that the District Society, acting only to protect its organization, regulate fair dealing among its members and maintain and advance the standards of medical practice, adopted reasonable rules and measures to those ends, not calculated to restrain Group Health, there would be no guilt, though the indirect effect may have been to cause some restraint against Group Health. It would be justified if but an incidental result of reasonable regulation of the membership and affairs of the organization, for the statute comprehends only such restraints as do directly and unreasonably affect freedom of competition in the trades and professions.

In joining the District Society members assumed the duty of compliance with laws and regulations thereof. The right to practice medicine gave a doctor no right to be a member of the Society. Discipline and control of members of a society, within reasonable bounds, are essential. When applied in good faith, under fair rules, without ulterior purpose to injure the business of a member or others, there is no wrong. However, such rules and regulatory actions cannot be justified where the real purpose, or the natural results, are to interfere with free competition.

The defendant physicians had the individual right to determine with what other physicians they would consult, and refusal to do so with particular physicians is not of itself illegal. Although, if, as alleged, it was done in furtherance of a conspiracy against Group Health and its doctors, it would be illegal. So too a doctor may refuse to treat patients in a particular hospital for any reason at all, but if a group of doctors, pursuant to a concerted scheme, refused so to do to injure the business of the hospital, their acts would be illegal; for in the eyes of the law there is danger to the public interests where many combine and act together to interfere with the free play of competitive forces in business and professions.

There was no duty on the societies, their officers or members, to approve Group Health or its plan of medical care. They could not rightfully oppose in a manner intended to restrain its operations. But they did have the right of legitimate criticism, argument and persuasion, however persistent and severe; either separately or by collective effort; through the medium of speech, letters or print. If their opposition was thus

confined and did not take the form of a conspiracy to restrain or was not done in pursuance of such a scheme, there was no violation of the statute.

So too the "White List" of the District Society and the Mundt Resolution of the American Society were not wrongful in themselves. Their apparent purposes were justifiable, and if those were in fact the real objects the defendants had the right to combine and act together to promote the same in good faith; but, if they were perverted to advance the aims of a conspiracy, any steps thus taken would bring the actors within the criminal scheme.

The hospitals had the lawful right to prescribe rules and regulations governing the use of their facilities by doctors and patients. In their boards was vested the authority to decide what physicians would be allowed the privileges. A doctor had no right to demand them. To grant or refuse the same rested solely with the hospital. Therefore, if denial of privileges to Dr. Selders, or other members of the Group Health staff, represented the voluntary decision of the boards, no question would arise as to the legality of their acts. However, if refusal was arbitrary and to serve a criminal conspiracy against Group Health or their doctors, it would violate the statute.

Much evidence relates to the so-called background of the alleged conspiracy. It is intended to show power of the medical societies over doctors and hospitals and opposition to certain forms of medical practice. No inference of guilt can be drawn from such evidence alone; nor from any power or opposition it may reveal, because those acts were before the alleged conspiracy. Therefore, that evidence can only be considered as it may shed light upon the intent and effect of later acts within the period of the alleged conspiracy.

Numerous letters, writings and oral statements of defendants and other persons have been proved. In many instances the authors have testified to the meaning they intended. However, arguments of counsel reveal frequent conflict as to the true meaning. It will be for you to interpret the writings and declarations fairly, in the light of all the evidence. If, when so considered, any are deemed equally susceptible of two meanings, one indicative of guilt, the other of innocence, then I think it only fair that you favor the innocent interpretation, just as you would in dealing with circumstantial evidence or the ultimate questions on which a verdict depends where there appear two reasonable theories or hypotheses one equally as reasonable as the other.

The respective merits of differing methods of medical care are not an issue in this case. Advocates and adherents of each are entitled to their views and may follow their choice. They had the right to support the same by fair competition and to oppose by way of discussion, argument and persuasion. But neither group would be justified in conspiring to restrain the activities of the other.

The legality of Group Health, or its methods of providing medical care, or the quality thereof, or its financial condition, or the grant of money by others to it are not issues in the case.

The defendants, however, had the lawful right to discuss and to argue these matters in opposition to Group Health Association and its methods of medical care, and to do so would constitute no violation of the statute.

In judging of the evidence you must necessarily evaluate the testimony of individual witnesses. Only thus can you determine the truth, and it is the truth you must seek. Bring to that task your knowledge of human nature; your ability to judge of men; their sources of knowledge; their intelligence; their motives; their intentions, so you may discern the real character behind the spoken words and measure their weight of truth and accuracy.

Interest in those things involved within the controversy or its results; friendship or animosity towards persons concerned therein, and many other human factors, may or may not affect the desire and capacity of a witness to tell the truth, depending largely on his innate character. Give to the testimony of each witness only that weight to which in your good judgment it is entitled when tested by the foregoing considerations and the light of other evidence in the case. Interpret writings and declarations fairly according to reason and probabilities, as the circumstances surrounding their making may reflect a true meaning.

In your deliberations give thought to the views of your fellow jurors. By full and free discussion, apply your best reason and judgment. Without sympathy or prejudice, calmly and dispassionately endeavor to reach a common understanding as to the truth, and return a verdict accordingly.

And now, ladies and gentlemen, as you retire to consider of your verdict, and throughout the course of your deliberations, be ever mindful of the solemn obligation imposed by your oath as jurors to render a true verdict according to the evidence; so help you God!

EDITORIAL COMMENT ON THE VERDICT

LOGIC AND JUSTICE

(Washington, D. C. *Post*, April 6)

There is a basic inconsistency in the verdict of the jury in the now famous trial of the doctors for conspiracy in restraint of trade. By convicting the American Medical Association and the District Medical Society, while exonerating the 18 individual defendants, the jury seems to imply that the societies acted independently of their officers. Laymen will find it difficult to conceive how organizations can conspire to violate the law without involving a single person. In his charge to the jury Judge Proctor referred to a criminal conspiracy as "a meeting of minds for concerted action" in violation of the law. Minds are very decidedly human. So the conspiracy which the jury found to have existed in this case must have been the work of individual doctors. Yet only the two organizations were convicted.

No special acumen is needed to see that the verdict is thus thoroughly illogical. Some participants in the case have properly branded it a "sentimental verdict." One should hasten to add, however, that this does not necessarily mean it is wrong or lacking in justice. The lawyers who battled over this case for eight weeks placed tremendous weight upon logic and the establishment of technical points. Apparently the jury was more interested in rendering approximate juistice. At any rate, it cut through the mountains of evidence to reach an expedient conclusion which makes up in other virtues what it lacks in consistency.

The effect of the verdict is to stop the A. M. A. and the D. M. S. from interfering with the Group Health Association or any other agency designed to make medical care more readily available to people in need of it. Of course, the A. M. A. is free to criticize any system for the practice of medicine that it may disapprove. But it must not, under penalty of criminal prosecution once more, attempt to restrain the legal practice of medicine by any other doctors. New systems based on prepayment for medical care during specified periods will be free to operate if they win public approval. That is the real objective which the Department of Justice sought in bringing the suit.

Many factors doubtless entered into the acquittal of the individual doctors. Obviously the jury did not wish to leave any reflection upon the outstanding doctors against whom this case was brought. No doubt it also took special note of the once prevalent belief that the practice of medicine was not a trade within the meaning of the Sherman Act. It reasonably concluded that the doctors had no intention of violating the law in their fight against G. H. A. In any event, the verdict is less inconsistent than the Sherman Act itself, as recently interpreted by the Supreme Court. Organized doctors may be punished for restraining interstate "trade" to the detriment of the public. But organized labor unions are free to cut off trade in even vital defense supplies for the purpose of establishing a monopoly for the benefit of one group of workers.

CARPENTERS NOT IN TRADE, DOCTORS ARE—THAT IS THE LAW

(Baltimore *Sun*, April 6)

Thanks to Mr. Thurman Arnold's ingenious Sherman Act enforcement drives, the state of the law against restraints of trade is at the moment a curious one. In the Hutcheson case, which Mr. Arnold lost in the Supreme Court of the United States on February 3, it was held that labor unions, for the purposes of the antitrust acts, are practically not in trade or commerce at all. On Friday, a jury in District Court in Washington brought in a verdict against the American Medical Association resting on an appellate decision that physicians are in trade or commerce.

So far as the adjudication on labor unions goes, there doesn't seem much that anybody can do about it, except through new legislation. The Hutcheson case involved a jurisdictional strike by an A. F. L. carpenters' union, which paralyzed the Anheuser-Busch plant at St. Louis. In that case, Mr. Justice Frankfurter removed labor unions from the scope of the anti-trust laws except in certain very narrow circumstances. That decision is final, however right Mr. Justice Roberts and the Chief Justice may have been in calling it a "usurpation by the courts of the function of the Congress."

No such finality as yet attaches to the assumptions on which the A. M. A. verdict of Friday rests. No question of interstate commerce was raised in the A. M. A. case, so physicians, under the law, are not yet in interstate commerce, anyhow. Also, the Supreme Court has not yet passed finally on whether they are engaged in trade in the District of Columbia, in such a way that section 3 of the Sherman Act, which applies the act to the District of Columbia, comes into force.

It is true that the District Court of Appeals has held that the law "governing restraints of trade . . . embraces the field of the medical profession." That decision was appealed to the Supreme Court, but the Supreme Court refused to act on the appeal when made. The question is thus still open, and it may be raised again if the case decided Friday finally reaches the Supreme Court a second time.

As the antitrust law now stands, however, medical associations are in trade or commerce and carpenters' and other unions are not. That, as we said at the outset, is a curious situation.

THE A. M. A. NEEDS A NEW CHARTER

(Chicago *Tribune*, April 7)

The American Medical Association and its local society in Washington, D. C., have been convicted by a federal jury of violating the antitrust law. At the same time the jury acquitted all of the individual defendants, who included the principal executive employees of the association.

This verdict had a parallel some months ago in the federal court at South Bend, where the General Motors corporation was convicted of violating the antitrust laws in financing the sale of its cars, but all of the officers of the corporation were acquitted. This, as it turned out, was most fortunate for Mr. Roosevelt. It saved him the embarrassment of plucking one of the defendants, Mr. Knudsen, out of jail when he needed him to head OPM.

The jurors seem to have been in no doubt that a crime was committed, yet when they were asked to say who committed it their answer was "Nobody." Perhaps the legal metaphysicians can straighten us out. Queries might well be addressed to the prosecutor of the case, Mr. Thurman Arnold, who has written that antitrust prosecutions are a sham anyway, being designed to propitiate the public conscience for allowing acts that our moral sense tells us are wrong but which our practical judgment says are necessary.

The charge against the doctors at Washington was that they engaged in a conspiracy in restraint of trade against the Group Health association, an organization that undertook to furnish government employees with medical care in return for a flat monthly fee. The A. M. A. asserts that arrangements of this type tend to lower the standards of medical care, and in consequence its members, at the instigation of the association's leaders, refused to have any professional relations with the physicians hired by the Group Health organization.

The antitrust conviction may impress upon the members of the A. M. A. that when they organized they took out the wrong kind of a charter. They should have applied to William Green or John L. Lewis. So equipped, they would not have been reduced to refusing to practice in the same hospitals with a physician who signed up with Group Health. Dr. Morris Fishbein could just have gone around some evening and broken the wrong guy's fingers with a blackjack, an operation that does a surgeon no more good than it does a musician, and Mr. Justice Frankfurter would have told Thurman Arnold not to get himself all wrought up over a passing moment of animal exuberance.

A good broad A. F. L. or C. I. O. charter would solve a lot of the medical profession's economic problems. Its members would not have to worry about overproduction of doctors. They could just close their membership rolls and have some of their members, sitting on the state and local examining boards, prosecute the newcomers for practicing without a license.

Draft boards wouldn't be asking physicians to give their services free for examination of the draftees. All the chest thumping in charity wards would be done at the union scale and any nonunion medico who tried to cut in on the business would have to pay a $1,000 initiation fee. Ladies expecting offspring would have to be careful that the labor pains did not start after 4 p. m. on a Friday; otherwise Papa would have to pay double time for a week-end delivery.

The medical union might be able to take on a number of profitable activities that A. M. A. members now deny themselves, such as performing abortions or, for a suitable fee, slipping a dose from the black bottle to millionaires whose heirs were growing impatient. While such activities might arouse public protest, the union docs could be sure that President Green would not bother them. That would be interfering with their autonomy.

THE MEDICAL DECISION

(New York *Times*, April 7)

A federal jury in Washington has found the American Medical Association and the Medical Society of the District of Columbia guilty of antitrust law violation but acquitted eighteen individual defendants in the case. Presumably an appeal will be carried to the higher courts. But so far as the decision goes, it opens the way to wider developments in the field of group medicine.

A country with forty-eight states, with wide variations in climate, density of population and occupation, will need more than one type of medical practice. Experimentation with cooperatives, groups of physicians who practice as they would in a hospital, prepayment of medical care, voluntary health insurance, is clearly called for before we attempt to legislate either on a state or national scale. It was experimentation of this kind that the American Medical Association discouraged. The Washington decision will, if it stands, clear the way for carrying out health plans which have hitherto been frustrated. Before we tax ourselves to the tune of $800,000,000 a year to care for millions of medically indigent who cannot afford to pay anything for catastrophic illness, we ought to know how far we can go in solving our health problem through group methods. Out of the experimenting various systems of medical practice are bound to emerge—systems that will be a guide to legislators and that will enable us to avoid the mistakes of Europe.

THE MEDICAL VERDICT

(Washington, D. C. *Star*, April 5)

In finding that the American Medical Association and the District Medical Society conspired to violate the antitrust laws, while exonerating eighteen individual defendants, a District Court jury has returned what is obviously a compromise verdict.

From the common sense standpoint it seems illogical to hold that the two organizations could have been guilty of a conspiracy if the individual members were innocent, but, as a matter of law, the verdict falls well within the instructions given the jury by the trial judge. The intent of the accused in doing certain things is the all important factor in conspiracy cases, and it may well be wondered how two organizations, as organizations, could have entertained a criminal intent in the absence of any such intent on the part of their constituent members. There is precedent for such a split verdict, however, where intent is the essential element.

As matters stand in the medical case, there will be few who will not welcome the acquittal of the individual defendants. Certainly, the ends of justice would have been poorly served had these distinguished physicians been obliged to wear the stamp of criminality, even in a technical sense. On the other side of the ledger, the verdict carries assurance that Group Health, Inc., the organization against which the alleged conspiracy was directed, will be given a chance to prove its worth without interference. If that is the net result, assuming that the verdict is upheld in event of an appeal, it would seem that this highly controverted case has been terminated on a basis of substantial justice.

A NATUROPATHIC SUBTERFUGE

PURPORTED LICENSURE BY STATE NATUROPATHIC ASSOCIATIONS

J. W. HOLLOWAY Jr.
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CHICAGO

If a group of pretenders in the field of healing undertake to support their appeal for recognition on a palpably fraudulent premise, that appeal deserves slight consideration.

In a current comment published in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, Feb. 25, 1939, page 736, attention was called to a number of instances in which naturopaths had resorted to outright trickery to obtain favorable legislation. In 1933 Iowa naturopaths sponsored a bill to establish an independent examining and licensing board. That bill proposed to define naturopathy "according to the definition of naturopathy, enacted by the Congress of the United States of America and the District of Columbia." Prior to that year the American Naturopathic Association, Arizona District, which will be referred to in more detail later on, was incorporated in Arizona, an examining board of which claimed to be acting under the authority of the American Naturopathic Association and "by virtue of the definition of naturopathy as set forth in and by an Act of Congress approved February 27, 1929, and verified in and by an Act of Congress approved February 7, 1931, which Act defines naturopathy." In 1938 a group attempted to obtain corporate rights in Missouri, including the authority to establish naturopathic schools for the training of students in naturopathy "as defined by Congress under the provisions of House Bill No. 12169 passed and approved by the Seventy-First Congress of the United States in the year 1930." In 1939 a naturopathic bill in North Dakota proposed to define naturopathy "as provided by an Act of Congress in 1929." Thus there seems to be a difference of opinion as to the exact date when this congressional act is supposed to have been passed, the date being variously given as 1929, 1930 and 1931. In January 1941 a circular, apparently distributed in Indiana, reproduced the alleged definition. This circular bears the heading "An Act of the 71st Congress H. R. 12169, passed February 7, 1931." Immediately preceding the definition is this statement:

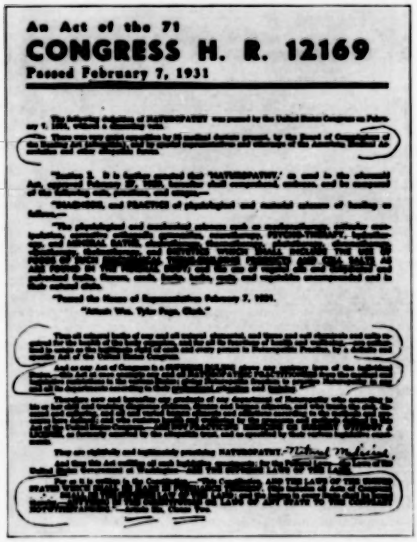

An Act of the 71
CONGRESS H. R. 12169
Passed February 7, 1931

Fig. 1.—Circular distributed in Indiana.

> The following definition of NATUROPATHY was passed by the United States Congress on February 7, 1931, without a dissenting vote.
>
> There was very great opposition by 35 medical doctors present, by the Board of Commissions [sic] of the Healing Art (allopathic), and by special representatives and attorneys of the American Medical Association and other allopathic forces.

Then after reproducing the alleged definition, this circular continues:

> And as any Act of Congress is a SUPREME RULING above any contrary laws of the individual States,—this Act at once exempts any and all NATUROPATHIC PRACTITIONERS from the medical and legislative restrictions in the various States; giving Naturopaths freedom to practice Naturopathy in any and all its departments according to their professional schooling and training.
>
> . . . . . .
>
> And thus this Act nullifies all such legislative enactments; for the Federal Laws—the Laws of the United States Government at Washington —ARE THE SUPREME LAWS OF THE LAND.
>
> For so it is written in the Constitution,—"This Constitution, AND THE LAWS OF THE UNITED STATES WHICH SHALL BE MADE IN PURSUANCE THEREOF (this includes all Acts of Congress) [the circular states], . . . SHALL BE THE SUPREME LAW OF THE LAND; and the judges in every State shall be bound thereby,—ANYTHING IN THE CONSTITUTION OR LAWS OF ANY STATE TO THE CONTRARY NOTWITHSTANDING."—Article Six, Clause Two.

Figure 1 reproduces this circular in full.

What are the facts about this congressional definition of naturopathy? During the Seventy-First Congress a bill was introduced to define naturopathy, H. R. 12169. This bill passed the House of Representatives on Feb. 7, 1931 but made no further legislative progress and died when the Seventy-First Congress adjourned. No other bill has since been introduced in Congress proposing to define naturopathy; hence there does not exist a congressional definition of naturopathy. The Healing Arts Practice Act for the District of Columbia was approved Feb. 27, 1929. This act did provide for a board of naturopathic examiners but did not undertake to define the practice. It authorized the Commission on Licensure to Practice the Healing Arts to formulate such a definition. The naturopaths were not satisfied with the definition formulated; that dissatisfaction led to the introduction of the bill in the Seventy-First Congress already mentioned. The definition that was formulated by the Commission on Licensure to Practice the Healing Arts, incidentally, does not correspond with the definition that the naturopaths have alleged was enacted by Congress.

If the naturopaths believe that Congress has already defined naturopathy and that entitles naturopaths to engage in practice in the several states, why are they so energetic in their efforts to obtain the enactment of state legislation? Recently a letter was written Nov. 9, 1940, on the letterhead of the National American Naturopathic Association, of Washington, D. C., which states that a federal Naturopathic Eclecticism Act has been drafted for presentation to Congress. This bill, among other things, apparently will create a "Naturopathic Eclectic Association of the United States of America." This letter was an appeal for funds. Other publicity emanating from the National American Naturopathic Association in the form of "Greetings for 1941 to the Members of the National Naturopathic Association from the Executive Committee" refers to this federal bill. Here are some interesting excerpts from this New Year's pronouncement:

> Recently Dr. T. M. Schippell, Secretary of the National American Naturopathic Association, propounded certain questions to Mr. B. H. Schwarz (Corporation Counselor) and who is Treasurer of the United Brotherhood Tolerance Movement, an organization which has declared its readiness to cooperate with this Association toward the prosecution of the contemplated Bill. The questions propounded and their answers, are as follows:
>
> *Question No. 1.* By passing a Federal Bill, known as THE NATUROPATHIC ECLECTICISM ACT, will that give one the right to legally practice in all the states and territories of the United States?

Read before the joint meeting of the Council on Medical Education and Hospitals and the Federation of State Medical Boards of the United States at the Thirty-Seventh Annual Congress on Medical Education and Licensure, Feb. 18, 1941.

Answer No. 1. It is the opinion that if and when the Federal Bill known as the Naturopathic Eclecticism Act is passed, it should give the right to legally practice in all states and territories of the United States and that in the states where there may have been particular opposition to drugless practice, the mere passing of the Federal Act would be recognized in such states that proper legislation could then easily be presented or a ruling obtained from the Attorney General and the Secretary of State permitting practice therein.

Question No. 2. By the passage of such an Act, will it not be attempting to do away with the State rights?

Answer No. 2. When, as and if such Act is passed, it would not act as an abrogation of any State rights or laws, but would have a tendency to supercede them being a Federal Act, and since the medical profession, whether M.D.'s or drugless practitioners all use the mail in one way or another by billing their clients, etc., naturally, interstate law would become involved and the Federal Act or Bill would supercede any State right or opposition.

Thus naturopaths have repeatedly rested their cause in part on a nonexistent congressional definition of naturopathy. Furthermore, in many of the states incorporated naturopathic associations issue to members imposing looking certificates and require that these certificates be filed in the office of the clerk of the county in which the certificants reside.

ARIZONA

Some time prior to January 1933 the American Naturopathic Association, Arizona District, was incorporated in Arizona. It issued certificates to members containing this paragraph, among others:

> This Certificate is conferred upon the member herein named as recognition of his legal rights as a citizen of the United States and of the State of Arizona to pursue the practice of naturopathy within the corporate powers of this Association (as is instanced by the recognition of such practice as already established within the terms of its Charter), and the same is issued by order of the said Association, whereunto is affixed the official signature of its President and Secretary and is validated with its seal thereof.

This certificate purports to be issued in recognition of the "legal rights" of the holder to pursue the practice of naturopathy.

A so-called Examining Board of Naturopathic Physicians, Arizona District, was created by the foregoing corporation and apparently the board was authorized to examine members and issue certificates certifying the holder to be "a Naturopathic Physician by virtue of having presented the necessary credentials and having successfully passed the required examinations as given by this board." One of these certificates was presented to the California Board of Medical Examiners in 1934 bearing the endorsement of a county recorder for a county in Arizona, such endorsement bearing witness to the fact that the certificate had been "duly recorded in Book No. 2 of Physician's License Records." The holder of this certificate stated that he understood that it entitled him to practice as a naturopathic physician in the state of Arizona. As a sequel to the activities of this association in Arizona, a naturopathic initiative measure was submitted to the people in 1934 containing this section: "All Naturopathic Physicians previously examined and holding certificates of qualification issued by the Examining Board of the American Naturopathic Association, Arizona District, Incorporated, and in good standing at the passage of this act shall be entitled to and shall receive a certificate designated as a Naturopathic Physicians License without further examination." In effect, the voters were asked to validate the certificates previously issued by this private association. While the intiative measure failed, the legislature in 1935 created an independent naturopathic examining and licensing board. This 1935 law provided that any person who had practiced naturopathy continuously in the state for at least five years was entitled to a license to practice naturopathy under the act after having passed an examination given by the board "covering the subjects it may assign for such examination." These prior practitioners apparently were not required to meet the same test that was to be required of other applicants. They were not required, for instance, to have graduated from any naturopathic school but were to be licensed solely on the basis of prior practice plus an examination in such subjects as the state board of naturopathic examiners designated.

CALIFORNIA

As early as 1904, an Association of Naturopaths of California was incorporated in that state, with a board of examiners authorized to examine all applicants for active membership and to issue to successful examinees "a diploma, conferring the degree of doctor of Naturopathy upon them." Figure 2 is a copy of one of the diplomas so issued, an imposing looking document bearing across its top in large old English type the words "The State Board of Examiners of the Naturopathic Physicians of California." The body of this diploma reads:

> This Certifies that . . . has passed the required examination in all branches of Naturopathic Therapeutics and that The Board of Examiners here-with in consideration of the applicant's qualification and by the authority vested in us by the State of California confers upon . . . the degree of
>
> DOCTOR OF NATUROPATHY
>
> With all the privileges, rights and advantages there-unto belonging.

This diploma bears an important looking seal and is duly signed. While this document does not on its face purport to authorize holders to engage in the practice of naturopathy in California, apparently certain holders did so engage without bothering to obtain state licenses. In 1909 the legislature of

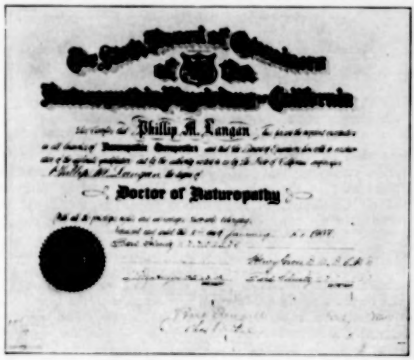


Fig. 2.—Diploma issued in California.

California was induced to amend the medical practice act to provide that:

> Any person who holds an unrevoked certificate issued by the board of examiners of the Association of Naturopaths of California, incorporated under the laws of the State of California, August eighth, 1904, and who shall be practicing naturopathy prior to the passage of this act, shall be entitled to practice naturopathy in this state, the same as if it had been issued under this act. The board of medical examiners shall endorse said certificate at their first meeting after this act becomes a law, or at any subsequent meeting of the board, but not later than six months after the passage of his act by signature of its president and secretary and affixing its official seal. *Provided, however*, that the holder of such certificate has signed his or her name on the back of said certificate and the president and secretary of the Association of Naturopaths of California, have certified over their respective signatures that the holder of said certificate is the rightful owner of same.

The records of the California board of medical examiners indicate that some one hundred and three of these certificates, or diplomas, were duly endorsed under the law just mentioned. The photostatic copy of the naturopathic diploma exhibited previously bears the endorsement of the board of medical examiners as contemplated in the 1909 act. Advices received from California indicate that the naturopathic association is still issuing these diplomas.

NORTH DAKOTA

On April 13, 1939 there was filed with the secretary of state of North Dakota a copy of the "Constitution and By-Laws of the North Dakota Naturopathic Physicians, Inc., adopted July 17, 1938." Section 1, article II of the constitution stated that one of the purposes of the corporation was to define the practice

of naturopathy "in harmony with an Act of Congress passed in 1929." Another stated purpose of the corporation was "to certify the qualifications of its members and to register such certification in the county in which they practice." The by-laws provided for a Board of Naturopathic Examiners with authority to "issue to each member of the Corporation, whose qualifications shall be satisfactory to the Board, a certificate of registration certifying that such member is qualified to practice Naturopathy in the state of North Dakota" and to "Require that all Certificates of Registration issued by the Board be recorded in the office of the Register of Deeds in the county wherein the practitioner resides." A charge of $5 was provided for each certificate of registration and, the by-laws continued, on payment of the annual membership dues of $10 by the member the board was to issue "a renewal receipt card which must be prominently displayed in connection with the Certificate of Registration in the office of the practitioner." The board of examiners was authorized to revoke certificates for specified causes, such as habitual drunkenness, procuring or aiding in a criminal abortion, failure to pay membership dues and deceptive advertising.

STATE OF NORTH DAKOTA

THIS IS TO CERTIFY THAT

Samuel O. Rudgren

having been duly examined and found qualified by the Board, as required by the Constitution and By-Laws of the North Dakota Naturopathic Physicians, a corporation legally organized and existing under the laws of the State of North Dakota, is hereby granted this Certificate as a

Registered Naturopathic Physician

subject to the provisions and restrictions of said Constitution and By-Laws.

Given under our hands, the Board of Naturopathic Examiners, and the corporate Seal of the North Dakota Naturopathic Physicians, at Bismarck, North Dakota, this 15th day of Sept. A. D. 1938

Fred H. Miller N.D.

No. 19

Fig. 3.—Certificate used in North Dakota.

One of the certificates issued by this corporation read as follows:

BOARD OF NATUROPATHIC EXAMINERS
STATE OF NORTH DAKOTA

This is to certify that . . . having been duly examined and found qualified by the Board, as required by the Constitution and By-Laws of the North Dakota Naturopathic Physicians, a corporation legally organized and existing under the laws of the State of North Dakota, is hereby granted this certificate as a registered Naturopathic Physician, subject to the provisions of said Constitution and By-Laws.

Given under our hands the Board of Naturopathic Examiners, at Bismarck, North Dakota, this . . . day of September, 1938.

Affixed to the certificate are the names of the president, vice president and secretary of the board of naturopathic examiners and a seal of the North Dakota Naturopathic Physicians, Incorporated. This certificate bears evidence that it was recorded in the office of the register of deeds in a certain county in North Dakota. Figure 3 is a facsimile of one of these certificates.

A sequel to the activities of this corporation in North Dakota is to be found in a suit prosecuted successfully by the North Dakota State Board of Medical Examiners against the corporation and against certain individuals associated with its activities who were holding certificates issued by the corporation. The complaint in this case asked for the following relief, which was granted by the court:

WHEREFORE, the plaintiff prays for a judgment and a decree cancelling and terminating the charter of said corporation, ousting the members of said corporation from their position held out to the public as licentiate doctors or physicians and ordering their respective licenses and certificates as and wherever filed of record in the office of the Register of Deeds in said state to be cancelled of record, and restraining and enjoining the said defendants, and each of them, from examining applicants, from issuing certificates for the practice of naturopathy within said state, and from the practice of naturopathy in said state, and from practicing medicine in said state and treating human ailments professionally for a fee and from continuing their illegal and wrongful acts and conspiracy . . ."

I would like to pause long enough to pay tribute to the manner in which the general counsel for the North Dakota State Board of Medical Examiners has prosecuted this matter. Judge H. A. Bronson, in his capacity as general counsel, has wisely advised the board and has exhibited a fine appreciation of the dangers to the people of the state of North Dakota incident to the operation or to the functioning of the naturopathic corporation. He has been diligent in his research and has a comprehensive conception of the fundamental issues involved in the controversy.

TEXAS

In 1936 the Texas State Naturopathic Association was incorporated "to support and maintain a benevolent, charitable and educational undertaking, and to promote the teaching of the laws of nature and of health hygiene, and to maintain a college and library for such purposes." This corporation, however, issued what purported to be "licenses." One of such "licenses," bearing the number 521, was as follows:

TEXAS STATE NATUROPATHIC
ASSOCIATION, INC.

LICENSE

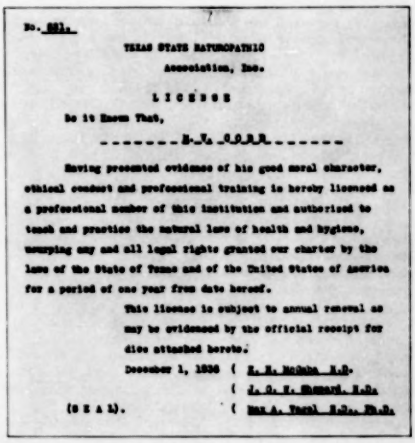
Be it Known That,

M. V. COBB

Having presented evidence of his good moral character, ethical conduct and professional training is hereby licensed as a professional member of this institution and authorized to teach and practice the natural laws of health and hygiene, usurping any and all legal rights granted our charter by the laws of the State of Texas and of the United States of America for a period of one year from date hereof.

This license is subject to annual renewal as may be evidenced by the official receipt for dies [sic] attached hereto.

December 1, 1936 (E. H. McGaha, N.D.
J. G. W. Shepard, N.D.
(SEAL). (Max A. Vogel, N.D., Ph.D.



No. 521.

TEXAS STATE NATUROPATHIC
Association, Inc.

LICENSE

Be it Known That,

M. V. COBB

Having presented evidence of his good moral character, ethical conduct and professional training is hereby licensed as a professional member of this institution and authorized to teach and practice the natural laws of health and hygiene, usurping any and all legal rights granted our charter by the laws of the State of Texas and of the United States of America for a period of one year from date hereof.

This license is subject to annual renewal as may be evidenced by the official receipt for dies attached hereto.

December 1, 1936 (E. H. McGaha N.D.
(J. G. W. Shepard, N.D.
(SEAL). (Max A. Vogel N.D., Ph.D.

Fig. 4.—"License" recorded in Bexar County, Texas.

This so-called license, reproduced in figure 4, was made a matter of record on the medical register of Bexar County, Texas. On this same medical register appears the following affidavit (fig. 5):

I, M. V. Cobb, do solemnly swear that I am practicing Naturopathy on authority of license certificate No. 521, issued to me by The Texas Naturopathic Assn. Inc., on the 1st day of December, A.D. 1936; that I

am 35 years of age; that I was born on the 26 day of February, A. D. 1901, in the County of ....., and State of Massachusetts; that the degree, Doctor of Naturopathy, was conferred on me by the National College of Chicago and P. S. C. Chiropractor on the 1st day of July, A. D. 1926; that I belong to the Naturopathic school of practice; that my postoffice address is 2005 S. Hackberry St., San Antonio, Texas.

Signature M. V. Cobb

Subscribed and Sworn to before me this 5th day of December, A. D. 1936.

Signed *Hart McCormick*
District Clerk in and for Bexar County, Texas.

by *Max R. Simmons*, Deputy

The original license certificate, No. 521, of which the above entry is a true copy, was filed for record at .....o'clock, 11: 6 A. M., on the 5th day of Dec., A. D. 1936, and duly recorded by me at 11: 6 o'clock A. M., on the 5th day of Dec., A. D. 1936.

Signed *Hart McCormick*
Clerk of District Court of Bexar County, Texas.

by *Max R. Simmons*, Deputy

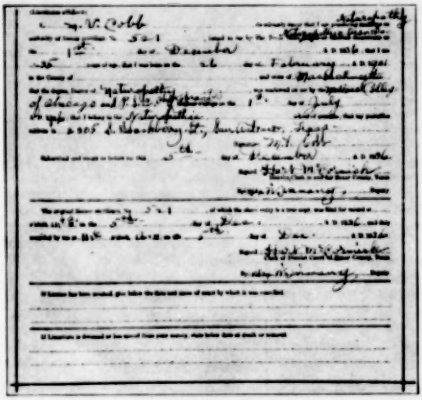


Fig. 5.—Affidavit.

The fact that this so-called license was numbered 521 may lead to the inference that 520 such "licenses" had previously been issued. Subsequently in a proceeding brought by the attorney general the district clerk of Bexar County was ordered to strike from the records the registration of these so-called naturopathic licenses. On two other occasions, this situation has been involved in court cases in Texas. One C. L. Hawkins, one of the original trustees of the Texas State Naturopathic Association, was prosecuted for practicing medicine without a license and convicted. On appeal, he complained because the trial court had declined to permit him to offer in evidence the charter of the Texas State Naturopathic Association. The appellate court, in affirming the conviction, was unable to understand on what theory this document might have been admissible in evidence. A charter granted to an association by the secretary of state, the court observed, would not authorize any one to engage in the practice of medicine without having complied with the medical practice act, nor would it relieve any one from prosecution for a violation of that act. (*Hawkins* v. *State*, 125 S. W. (2d) 580.) The other case involved one Max A. Vogel, listed as second vice president of the Texas State Naturopathic Association in its charter, and one of the signers of the so-called license issued to Cobb. Vogel was convicted of practicing medicine without a license and appealed. Vogel objected to the fact that in the argument to the jury the district attorney stated that he, Vogel, should have known that he was required to have a license to practice medicine, as many members of the Texas State Naturopathic Association had registered certificates which had been eliminated from the records in a court proceeding brought by the attorney general. Vogel's registration, incidentally, was one of those eliminated. The Appellate court, however, could see no merit whatever in Vogel's objection and the conviction was upheld. (*Vogel* v. *State*, 137 S. W. (2d) 1043.) Whether action has been taken in any counties of Texas, other than Bexar County, looking toward the striking from the records of the registration of the so-called naturopathic licenses, is not known. It is understood that action by the attorney general of Texas has been taken against the association.

VIRGINIA

By singling out Arizona, California, North Dakota and Texas, I do not mean to leave the inference that comparable situations may not exist in other states. On the contrary, there is evidence that they do. In recent correspondence with the Virginia State Board of Medical Examiners it developed that two naturopaths had been arrested for violations of the medical practice act and in each case the defendant possessed a certificate issued by an unofficial board of naturopathic examiners. Each certificate had been recorded in a county clerk's office. One such certificate was recorded in the medical register of the circuit court of Roanoke County.

The facts here presented should act as a stimulus for investigations by the medical examining boards of other states. Medical licensure is a function that belongs to the duly constituted boards, not to these private associations.

535 North Dearborn Street.

MEDICAL LEGISLATION

MEDICAL BILLS IN CONGRESS

Change in Status.—S. 165 has been reported to the Senate, providing for continuing in the service of the Army, Navy, Marine Corps and Coast Guard of the United States, beyond the term of their enlistment, those suffering from service connected disease or injury and in need of medical care or hospitalization.

Bills Introduced.—H. R. 3851, introduced, by request, by Representative Rankin, Mississippi, proposes to amend veterans' regulations so as to provide that a chronic disease, including nontuberculous respiratory diseases of the chest, becoming manifest to a degree of 10 per cent or more within one year from the date of separation from active service, shall be considered to have been incurred in or aggravated by service. H. R. 4278, introduced by Representative Coffee, Washington, proposes to impose a tax on income derived by nonprofit organizations from dividends as a result of ownership by such organizations of substantial or practical voting control of private corporations for profit. H. R. 4293, introduced, by request, by Representative May, Kentucky, provides that any person, whether or not in the employ of the United States, who shall furnish blood from his or her veins for transfusion into the veins of a person who is entitled to and is undergoing treatment at government expense, whether in a federal hospital or institution or in a civilian hospital or institution, or who shall furnish blood for blood banks or for other scientific and research purposes, shall be entitled to be paid therefor such reasonable sum, not to exceed the sum of $50, for each blood withdrawal as may be determined by the head of the department or independent agency concerned.

DISTRICT OF COLUMBIA

Change in Status.—H. R. 4057 has been reported to the House, authorizing the Federal Security Administrator to accept gifts for the Freedmen's Hospital and to provide for the administration of such gifts.

STATE MEDICAL LEGISLATION

California

Bill Introduced.—A. 1670, as amended in the assembly March 26 and March 28, proposes, among other things, so to amend the pharmacy practice act as to prohibit the retail sale and distribution of the following drugs except on the written prescription of a physician and surgeon, dentist or veterinarian surgeon: acetylureas, allylisopropylacetylurea, bromidiethylacetylurea, bromisovalerylurea, paraldehyde, sulfonmethanes, sulfonmethane, sulfonethylmethane, or chemically related central nervous system depressants, or compounds or mixtures thereof; aminophenylpyrazolones, amidopyrine, or compounds or mixtures thereof; phenylcinchoninic acids and esters, cinchophen, neocinchophen, or compounds or mixtures thereof; sobisminol, sulfanilamide, sulfapyridine, sulfathiazole, or chemically related chemotherapeutic agents, or compounds or mixtures thereof; phenylethylamines, amphetamine, or chemically related central nervous system stimulants, or compounds or mixtures thereof, except for external use as by inhalation, spray or wash; phenylhydantoins, phenylethylhydantoin, diphenylhydantoin, or chemically related central nervous system depressants, or compounds or mixtures thereof; thyroid, its physiologically active compounds or derived mixtures, or chemically and physiologically related agents, or compounds or mixtures thereof.

Connecticut

Bills Introduced.—H. 1969 and Substitute for S. 519, to amend the osteopathic practice act, propose that a licensed osteopath who, "upon the submission of proper credentials or by examination, satisfies said board [the osteopathic board] that he has received sufficient instruction and training, shall have the right to administer and prescribe anesthetics, antiseptics, sedatives and narcotics and biological products, and to perform such diagnostic procedures as are taught in approved schools of osteopathy."

Maine

Bill Introduced.—S. 482, to amend the chiropractic practice act, proposes (1) to require chiropractors, as a condition precedent to the annual renewal of their licenses, to furnish the chiropractic board satisfactory evidence that in the preceding year they have attended one of two educational programs conducted and supervised by the chiropractic board and (2) to define chiropractic as "the science of palpating and adjusting the segments and articulations of the human spinal column by hand and locating and correcting interference with nerve transmission and expression, without the use of drugs or surgery."

Massachusetts

Bills Introduced.—S. 624, to amend the workmen's compensation act, proposes that the term "personal injury" as used therein "includes infectious or contagious diseases if the nature of the employment is such that the hazard of contracting such diseases in any manner by an employee is inherent in the employment." H. 1838 proposes to authorize the formation of nonprofit medical service corporations to operate medical service plans whereby the corporation will pay on behalf of a subscriber thereto for such necessary medical services as may be rendered to the subscriber by the members of any medical organization with whom the corporation has a contract covering such services.

Michigan

Bills Introduced.—S. 271, to amend the chiropractic practice act, proposes to condition the annual renewal of a license on presentation of proof by the licentiate that in the preceding year he has attended not less than one two-day educational conference conducted by the state chiropractic society or that he has attended an equivalent educational conference. S. 272, to amend the pharmacy practice act, proposes, among other things, to prohibit the retail sale or distribution of barbital and other hypnotic or somnifacient drugs except on the prescription of a licensed physician, dentist or veterinarian "or other medical practitioner licensed to write such order." The bill further provides in this connection that duly licensed physicians, dentists or veterinarians may dispense any of the drugs mentioned to their patients "when such are under their immediate supervision and when in their judgment they deem it advisable," provided the dispensing practitioner shall keep a record of the date, the drug dispensed, the quantity thereof, and the name and address of the patient. H. Res. 48 proposes to request the Michigan social welfare commission to investigate the operation of contract medical programs being financed in part by state funds, and to report within thirty days concerning the total cost of medical aid to indigents, the amount of state funds expended, a medical audit of individual cases, a statement of the administrative organization in each county operating on a contract basis, and an itemized statement of administrative costs paid from public funds.

Minnesota

Bills Introduced.—H. 1365, to amend the law granting to a hospital treating a person injured through the negligence of another a lien on all rights of action, judgments, settlements or compromises accruing to the injured person because of his injuries, proposes to grant this lien also to nurses, dentists and physicians attending such individuals. H. 1427 proposes to prohibit the operation of a hospital, sanatorium, rest home, nursing home or other institution for the hospitalization and/or care of human beings without first being licensed so to do by the state department of health. H. 1346 proposes to condition the issuance of a license to marry on the presentation by each party to the proposed marriage of a physician's certificate that not more than thirty days prior to the date of the application for the license the party was given an examination for the discovery of syphilis and other venereal diseases, including a serologic test made by the state board of health laboratory and a physical examination by the physician, and that in the opinion of the physician the party does not have syphilis or another venereal disease in a communicable form.

Missouri

Bills Introduced.—H. 495 proposes, in effect, that when the words "physician" and "surgeon," including the derivatives and contractions of either said words, are used in any Missouri statute, unless the context is clearly to the contrary, they are to be construed as a legislative intent to include the practitioners of any school of medicine recognized by the laws of the state, including osteopaths, "as being endowed with definite privileges, rights and duties, as follows: To practice as doctors their respective arts of healing by giving physical examinations and by prescribing remedies and treating diseases of the human mind and body, according to the course of study and training as taught under the curriculum of their respective accredited schools, and thereby endeavor to alleviate diseases and pain of any patient, including the privilege, right and duty to practice their respective healing arts in all hospitals or institutions built or maintained by revenue derived from public taxes: To practice as doctors their respective healing arts by rendering public health, public safety, and public sanitation services and public precautionary measures sanctioned by any Act of Congress or sanctioned by any Missouri Statute." H. 519 proposes to enact a separate massage practice act and to authorize the state board of health to examine and license masseurs. A licensed masseur, apparently, will be authorized to give "Swedish, Reducing and Orthopedic massages; Hydro and electrotherapy and muscle toning, or similar work upon the body of any person by the external application by hand or mechanical devices or appliances of manipulating, stroking, kneading, vibrating, frictioning and tapping the tissues of the human body, complete in all its parts, for the promotion of circulation and physiological stimulation of the system, using in connection therewith the oils, lotions, creams, etc., as required for proper lubrication."

Ohio

Bill Introduced.—H. 655, to amend the medical practice act, proposes "that the practice of spiritual healing as an integral part of the mode of worship of an established religious denomination shall not be regarded as the practice of medicine."

Oklahoma

Bill Introduced.—H. 408 proposes to enact a separate physiotherapy practice act and to create an independent board of physiotherapy examiners to examine and license applicants for licenses to practice physiotherapy.

Pennsylvania

Bills Introduced.—H. Res. 63 proposes to "request the Secretary of Public Assistance equitably to revise the determinants guiding the prorating of fees payable to physicians attending recipients of assistance as well as expedite the payments of amounts now due to such physicians." S. 393 and H. 991, to amend the workmen's compensation act, proposes that a physician who has furnished care or treatment for which an employer is liable under the act shall be deemed a party in interest and shall have the right, with the consent of the injured employee to present a claim for remuneration for such services and care and have the same heard and determined and to enforce any award made in his favor. H. 956 proposes to create a Medical Specialist Board in the Department of Public Instruction to examine and license licensed physicians of the "Allopathic or Homeopathic medical profession" to practice in a special or particular branch of medicine or surgery as a specialist. The bill proposes to make it unlawful for any such physicians "to pretend knowledge of a special or particular branch of medicine or surgery or to hold himself out to the public as a specialist in any particular branch or division of medicine or surgery" without being licensed by the Medical Specialist Board.

Rhode Island

Bill Introduced.—H. 930 proposes to enact a separate naturopathic practice act and to create an independent board of naturopathic examiners. The bill proposes that applicants for licenses to practice naturopathy need not comply with the requirements of the basic science act of 1940. The bill proposes to define naturopathy as "a science dealing with the diagnosis and treatment of disease through natural therapeutics. It shall embrace and include physiological, anatomical and dietetic sciences, such as physiotherapy, dietetics and the use of herbs, barks and roots, including foods and fruits, powdered and dehydrated, and such other methods of treatment as are taught in the various recognized and standard schools of naturopathy, except the practice of major surgery and the prescription of poisonous drugs."

South Carolina

Bill Introduced.—S. 412, to supplement the naturopathic practice act, proposes, among other things, (1) that the use and practice of phytotherapy, minor surgery, obstetrics and gynecology, autotherapy and biologicals shall be made a part of and be included in the practice of naturopathy; (2) to require applicants for licenses to practice naturopathy to be graduates of "a regular four years high school course and one year premedical course" and (3) to give to the naturopathic licentiate the authority to sign birth, death and health certificates and to be accorded the use of the state biologic and chemical laboratories.

OFFICIAL NOTES

RADIO BROADCASTS

"Doctors at Work" is the title of the sixth annual series of dramatized radio programs being presented by the American Medical Association and the National Broadcasting Company.

Tickets are available for each broadcast. Address the Bureau of Health Education, American Medical Association, 535 North Dearborn Street, Chicago. Tickets are free, but a stamped self-addressed envelop should accompany requests.

The next three programs to be broadcast, together with their dates and titles, are as follows:

April 16. Health on the Wing.
April 23. The Big Red Schoolhouse.
April 30. Baby's Birthright.[1]

The program is scheduled over the Blue network of the National Broadcasting Company Wednesdays at 10:30 p. m. eastern standard time (9:30 central, 8:30 mountain, 7:30 Pacific time).

WOMAN'S AUXILIARY

Indiana

The auxiliary to the Allen County Medical Society met in January at the Irene Byron Sanatorium. Mrs. R. W. Terrill spoke on "What M-Day Means to Me as a Civilian," and Dr. Juan Rodriguez on "What M-Day Means to Me as a Physician." At a recent meeting in Fort Wayne Dr. D. F. Cameron spoke on "Taxpayers' Money and Medical Care."

The Elkhart County auxiliary was organized May 8, 1940 with twenty-three physicians' wives present. At the meeting in October in Elkhart Miss Riley Barton, superintendent of the Elkhart General Hospital, suggested that the group adopt as a project the supplying of certain hospital equipment. At a meeting in November Mrs. Robert Bender talked on "Spice from Life in India." Officers of the auxiliary are: president, Mrs. L. A. Elliott; president-elect, Mrs. D. D. Todd, and first vice president, Mrs. J. A. Work, all of Elkhart.

Recently the Howard County auxiliary gave a public relations tea in Kokomo following a program on cancer control. Mrs. Jesse S. Spangler, public relations chairman of the auxiliary, was in charge. Dr. Chester A. Stayton, Indianapolis, was the principal speaker.

The auxiliary to the Marion County Medical Society met recently at the Hillcrest Country Club of Indianapolis, with 105 members present. At a second meeting, at the Methodist Hospital Nurses' Home in Indianapolis, sixty-five members heard Miss Anna Hasselman of the John Herron Art Museum speak on "Castles in England."

Wisconsin

A newly organized auxiliary to the Ashland-Bayfield-Iron County Medical Society has brought the membership in Wisconsin to a total of twenty-seven county organizations. Mrs. D. F. Gosin and Mrs. E. S. Schmidt, Green Bay, president and organization chairman of the state auxiliary respectively, met recently with the new group. The twelve wives of physicians present from the cities of Ashland, Washburn, Bayfield and Montreal elected the following officers: president, Mrs. A. C. Taylor of Washburn; president-elect, Mrs. J. K. Shumate of Bayfield; vice president, Mrs. A. D. Andrus of Ashland, and secretary-treasurer, Mrs. J. W. Prentice of Ashland.

The Milwaukee County auxiliary had a Hygeia exhibit at the convention of the Wisconsin Hairdresser's Association in Milwaukee; Mrs. Maurice Hardgrave, county Hygeia chairman, and Mrs. G. H. Friedman, state chairman, were in charge. One hundred and fifty members attended the December meeting. Mrs. C. D. Partridge is president.

The Manitowoc County auxiliary made forty-nine babies' nightgowns for the Red Cross at their December meeting. Eighteen members of the Outagamie County auxiliary met in Appleton, Nov. 14, 1941, and discussed their annual Lecture and Tea, to which the public is invited to hear speakers on socialized medicine. These programs have been presented for the last three years. Mrs. Milo E. Swanton of Appleton is president.

1. This program will be broadcast at 10:30 eastern daylight saving (9:30 eastern standard time, 9:30 Chicago daylight saving time, 8:30 central standard, 7:30 mountain standard, 6:30 Pacific standard time).

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION AND PUBLIC HEALTH.)

ARIZONA

State Medical Meeting in Phoenix.—The fiftieth annual meeting of the Arizona State Medical Association will be held at the Hotel Westward Ho, Phoenix, April 16-19, under the presidency of Dr. Delamere F. Harbridge, Phoenix. The Maricopa County Medical Society will be host. Guest speakers will include:

Dr. Fred H. Albee, New York, The Biophysiological Considerations in the Treatment of Ununited Fractures.
Dr. Harlan Shoemaker, Los Angeles, Sarcoma of the Pancreas.
Dr. Henry F. Helmholz, Rochester, Minn., Blood Dyscrasias in Childhood.
Dr. Clarence L. Robbins, New Haven, Conn., Edema, Its Differentiation and Treatment.
Dr. Chevalier L. Jackson, Philadelphia, The Role of Bronchoscopy in the Diagnosis and Treatment of Bronchopulmonary Disease.
Dr. John S. Lundy, Rochester, Minn., Supportive Measures Including Transfusion of Blood and Plasma, Parenteral Solutions and Stimulants.
Dr. Morris Fishbein, Editor of THE JOURNAL, Chicago, American Medicine Prepares.
Nathan Sinai, Dr.P.H., New York, Public Health.
Herbert L. Stahnke, Ph.D., Mesa, The Venomous Nature of Some Arthropods of Arizona.

There will be round table discussions Thursday and Friday, and Saturday morning will be given over to a symposium on industrial practice in Arizona. An innovation this year is the opening of certain sessions to the public. Entertainment will include golf and bowling tournaments and scenic tours.

ARKANSAS

State Medical Meeting in Little Rock.—The sixty-sixth annual session of the Arkansas Medical Society will be held at the Marion Hotel in Little Rock, April 14-16, under the presidency of Dr. Henry T. Smith, McGehee. A feature this year will be a public meeting in the Robinson Memorial Auditorium and speakers will include Dr. Nathan B. Van Etten, New York, President of the American Medical Association, on "American Health as Related to National Defense." Included on the program will be the following:

Dr. Kenneth Phillips, Miami, Fla., A Résumé of Fever Therapy in the Management of Syphilis.
Dr. Frank M. Acree, Greenville, Miss., A Vaccine for Epidemic Influenza: A Preliminary Report.
Dr. Daniel L. Sexton, St. Louis, Endocrinology in General Practice.
Dr. William E. Sauer, St. Louis, Cancer of the Larynx.
Dr. Orval R. Withers, Kansas City, Bronchial Asthma: Clinical Types and Treatment.

CALIFORNIA

Changes in State Board.—Dr. Karl C. Gummess, Los Angeles, has been appointed a member of the state board of medical examiners, succeeding Dr. William H. Geistweit Jr., San Diego, whose term expired. Dr. Frederick N. Scatena, Sacramento, has been named a member of the board for a term ending Jan. 15, 1945, succeeding Dr. Charles E. Schoff, Sacramento, resigned.

Society News.—Dr. Charles Posner, Pasadena, among others, addressed the Los Angeles Society of Neurology and Psychiatry, February 19, on "Observations on the Effect of Testosterone Propionate on a Pituitary Tumor."——The speakers before the Los Angeles Society of Ophthalmology and Otolaryngology, February 24, were Drs. Carroll L. Weeks and Alfred R. Robbins on "Implantation Cyst of Conjunctiva" and "Surgical Procedure in Spastic Entropion," respectively.——The Trudeau Society of Los Angeles was addressed, February 25, among others, by Dr. John W. Kime, Fort Dodge, Iowa, on "Gold Therapy in Pulmonary Tuberculosis."——Dr. Bruce H. Douglas, Detroit, discussed "Tuberculosis in General Practice" before the Alameda County Medical Association, February 17, under the auspices of the Alameda County Tuberculosis and Health Association, Oakland.

ILLINOIS

Society News.—The Rock Island County Medical Society recently bought a sterling silver plaque on which will be inscribed all the names of its deceased members. Arrangements are being made to present the plaque formally to the society at the second Founders' Day banquet in November.

Meeting of Bacteriologists.—The Society of Illinois Bacteriologists will hold its spring meeting in Chicago, April 25, in the Board of Trade Building. Mr. Ralph E. Noble of the Chicago health department will speak on "Testing Water for the California Group" and Reuben L. Kahn, Sc.D., Ann Arbor, Mich., "Recent Observations in the Serology of Syphilis."

Cooperative Poliomyelitis Program.—Splints and convalescent serum for persons having infantile paralysis are to be made available throughout Illinois this summer, without cost, through a joint program of the state departments of public health and welfare, it is announced. The plan calls for the continued collection of convalescent serum from recently recovered adults, the provision of splints in the office of each of the state's twenty-one district health units, the development of special medical consultants in each section of the state and the opportunity for every county medical society to have a program on infantile paralysis with speakers from the state department of health. Cooperating are the state commission for handicapped children, the Illinois State Medical Society, the Samuel Deutsch Serum Center of Michael Reese Hospital, Chicago, and the Works Progress Administration.

Chicago

Meeting of Academy of Sciences.—Dr. Andrew C. Ivy, Nathan Smith Davis professor of physiology and professor of pharmacology, Northwestern University Medical School, will address the annual meeting of the Chicago Academy of Sciences Monday evening, April 14, in the academy auditorium. His subject will be "The Gastrointestinal Hormones and Their Uses." The public is invited.

LOUISIANA

Personal.—Dr. Oliver P. Daly, Lafayette, assumed his duties as superintendent of Charity Hospital, New Orleans, in accordance with an executive order placing the hospital under the jurisdiction of the state department of institutions, newspapers reported on March 2. Dr. Daly has been superintendent of Charity Hospital in Lafayette.——Dr. Horace Whitney Boggs, Shreveport, has been appointed superintendent of the Louisiana State Colony and Training School, Alexandria.——Dr. Charles Walter Mattingly, New Orleans, has been appointed a member of the state nurses board of examiners, succeeding Dr. Marion H. Foster, Alexandria.

New Director of Health of New Orleans.—Dr. John M. Whitney, Jennings, has been appointed director of the New Orleans department of health, succeeding Dr. James M. Batchelor, who will remain as a member of the board and consultant to Dr. Whitney. The new appointment was made on the recommendation of Dr. Charles L. Williams, medical director for Southern states, U. S. Public Health Service, who conducted a survey of the city's health problems at the mayor's request. The appointment of Dr. Whitney is the initial step in a reorganization of the city department of health. Expanded activities of the department will include added public health services to the school children of New Orleans, also recommended by Dr. Williams.

MASSACHUSETTS

Extension Courses.—Postgraduate extension courses are being conducted throughout the state by the Massachusetts Medical Society in cooperation with the state department of public health, the U. S. Public Health Service and the U. S. Children's Bureau. The eight week courses are being given in each of the following districts, once a week: Berkshire, Bristol South, Franklin, Hampden, Hampshire, Worcester and Worcester North.

Professors Emeritus at Harvard.—Dr. William C. Quinby has been appointed clinical professor of genitourinary surgery, emeritus, and Dr. Irving J. Walker clinical professor of surgery, emeritus, on the faculty of Harvard Medical School, Boston, effective September 1. Dr. Quinby graduated at the medical school in 1902. He has been clinical professor since 1926. Dr. Walker, who graduated at Harvard in 1907, has been clinical professor since 1928.

Society News.—Dr. Ernst P. Boas, New York, discussed "Factors That May Induce Cardiac Infarction" before the Greater Boston Medical Society, March 4.——A symposium on the management of some of the complications arising from acute and chronic otitis media was presented before the New England Oto-Laryngological Society in Boston March 19, with discussion by Drs. Harold G. Tobey, Charles T. Porter, Maxwell Finland, Champ Lyons, William Jason Mixter and Charles S. Kubik. All are from Boston.

MINNESOTA

Course in Surgical Pathology.—The department of pathology, University of Minnesota Medical School, Minneapolis, is offering a course in surgical pathology, June 16-July 25. In reporting on a similar course presented last year, Dr. James S. McCartney, who is in charge, stated that eighteen students attended, two from Kentucky, one from Texas, one from Virginia, and the rest from the section of the country near Minnesota. Because of experience gained from the work in 1940, the number of hours for the course has been increased from ninety to one hundred and twenty.

Dermatologic Society Observes Anniversary.—The Minnesota Dermatological Society marked its twenty-fifth anniversary, February 22, with a clinic at the University Hospitals, Minneapolis, and a dinner at the Minneapolis Club. Members of the Chicago Dermatological Society were guests. Special guests at the anniversary meeting included the following founders of the society: Drs. John Butler, Samuel E. Sweitzer and Clifton A. Boreen, Minneapolis, and Charles D. Freeman, John M. Armstrong and Henry N. Klein, St. Paul. Speakers included Dr. Sweitzer, who discussed the history of the organization, and Dr. Maurice Oppenheim, formerly of Vienna and now of Chicago, the old Vienna clinics. The Minnesota Dermatological Society, composed of physicians from St. Paul, Minneapolis, Duluth and Rochester, conducts monthly clinical sessions and one special meeting during the summer in Rochester, Duluth or Winnipeg.

NEW JERSEY

Society News.—Dr. William H. Schmidt, Philadelphia, addressed the Essex County Medical Society, Newark, March 13, on "Use of High Frequency Current in Medicine and Surgery."——Lieut. Col. Arthur P. Hitchens, M. C., U. S. Army, Philadelphia, addressed a combined meeting of the Cape May and Atlantic county medical societies in Atlantic City recently on "The Medical Profession and the Present Mobilization." Dr. David W. Kramer, Philadelphia, was the speaker before the Atlantic County society, March 14, on "Gangrene: Diagnosis, Prevention and Management."——Speakers who addressed the Bergen County Medical Society, Hackensack, March 11, were Drs. William P. Thompson on "Clinical Applications of Recent Advances in Laboratory Methods"; Edward B. Self, "Blood Studies as a Guide to Fluid Therapy," and Russel J. Fosbinder, Ph.D., "Interesting Facts Concerning the Blood Sulfathiazole." All are of New York.——The Academy of Medicine of Northern New Jersey celebrated its thirtieth anniversary at a meeting in Newark, March 20, with Dr. Hugh H. Young, Baltimore, as the guest speaker. Dr. Charles M. Robbins, Newark, president of the organization, related its history.

NEW YORK

Maternal Welfare Institute.—A regional institute on maternal welfare was held in Syracuse, April 3, at the Syracuse University College of Medicine, under the auspices of the maternal welfare committees of Cayuga, Cortland, Madison, Oneida and Onondaga county medical societies and of the state medical society; the Obstetric Society of Syracuse Hospitals; the division of maternity, infancy and child hygiene of the state health department, and the medical college. The speakers were:

Dr. Charles A. Gordon, Brooklyn, Demonstration of a Maternal Welfare Conference Procedure.
Dr. Merton C. Hatch, Syracuse, Management of Occiput Posterior Position.
Dr. Jess Thornton Wallace, Jackson Heights, Bleeding in the First Trimester of Pregnancy.
Dr. Stuart R. Blakely, Binghamton, Management of the Early Toxemias and the Late Mild Toxemias of Pregnancy.
Dr. Eliot Bishop, Brooklyn, Degenerative Changes of Pregnancy.

At a dinner meeting Dr. William E. Studdiford Jr., New York, spoke on "Chemotherapy of Postpartum and Postabortal Hemolytic Streptococcic Infections."

New York City

Session on Pulmonary Diseases.—A symposium on "Newer Surgical Procedures in the Treatment of Pulmonary Tuberculosis" will be presented at a meeting of the clinical section on chronic pulmonary diseases of the New York Tuberculosis and Health Association under the auspices of the Tuberculosis Sanatorium Conference of Metropolitan New York, April 16, at Cornell University Medical College. The speakers will be Drs. Louis R. Davidson on "The Monaldi Operation" and Herbert C. Maier, "Bronchospirometry in the Surgical Treatment of Chronic Pulmonary Disease."

Foreign Language Societies.—The International Medical Club of New York in cooperation with the French Medical Society, the Hispano-American Medical Society, the Hungarian American Medical Association, the Italian Medical Society, the Rudolph Virchow Medical Society and the Russian Medical Society held a meeting at the New York Polyclinic Medical School and Hospital, March 5. Dr. Foster Kennedy gave an address on "Contributions of Foreign Graduates to American Medicine" and Dr. Alfred M. Hellman, president of the Medical Society of the County of New York, spoke informally.

Tilney Memorial Fellowship Awarded.—Dr. Lewis Thomas has received the first research fellowship in neurology awarded by the Frederick Tilney Memorial. Dr. Thomas will begin his work in the field of infectious diseases of the central nervous system at the Thorndike Memorial Laboratory and the Boston City Hospital, remaining in Boston until June 1942, after which he will continue at the Neurological Institute in New York. The Tilney Memorial was established in 1940 in honor of Dr. Frederick Tilney, professor of neurology and neuroanatomy at Columbia University College of Physicians and Surgeons for many years, who died Aug. 7, 1938. Dr. Thomas graduated from Harvard Medical School, Boston, in 1937.

NORTH CAROLINA

New Medical School.—Dr. Nathan B. Van Etten, New York, President of the American Medical Association, will be guest speaker when the cornerstone is laid for the new Bowman Gray School of Medicine of Wake Forest College, April 16, in Winston-Salem. Other speakers will include Drs. W. Reece Berryhill, dean, University of North Carolina School of Medicine, Chapel Hill; Wilburt C. Davison, dean, Duke University School of Medicine, Durham; Wingate M. Johnson, Winston-Salem, president of the board of trustees, and Thurman D. Kitchin, president of the college. John R. Cunningham, D.D., president of Davidson College, Davidson, will give an invocation, and Mrs. Bess Gray Plumly, sister of the late Bowman Gray, whose gift made possible the new school, will lay the cornerstone. Dr. Van Etten will make another address at a banquet in the evening at the Robert E. Lee Hotel. In the afternoon the Eighth District Medical Society will hold a scientific meeting in the medical school building.

OHIO

Annual Postgraduate Day in Youngstown.—Members of the faculty of the University of Wisconsin Medical School, Madison, will be the lecturers at the annual Postgraduate Day to be presented by the Mahoning County Medical Society in Youngstown, April 30. The speakers, who will give two addresses each, are:

Dr. William S. Middleton, Bronchiogenic Carcinoma: A Challenge in Diagnosis and Treatment; Rationalized Therapeutic Experiences.
Dr. Joseph W. Gale, Empyema; Thoracic Surgical Problems.
Dr. Elmer L. Sevringhaus, Endocrine Therapy in General Practice; Diagnosis and Therapeutic Problems of the Climacteric.
Dr. Ralph M. Waters, Morbidity Accompanying the Therapy of Pain; The Service of Anesthesiology in the Modern Hospital.

NYA Health Program Adopted.—The council of the Ohio State Medical Association at a meeting February 16 approved cooperation with the National Youth Administration to carry on its health program in Ohio and adopted a statement of policy for the guidance of county medical societies in the program. Objectives of the health program are, briefly, a health examination for every youth assigned to the NYA work program, correction of health defects and improved technical advice and assistance for NYA efforts having a bearing on health. An appropriation of approximately $120,000 has been allocated for the work in Ohio. Mr. M. L. Dawson, formerly chairman of the department of physical education at Antioch College, Yellow Springs, is state supervisor of the program and Dr. Carl A. Wilzbach, health commissioner of Cincinnati, has been appointed state health consultant. The state health department also is cooperating. Initial efforts will be directed toward the physical examinations, it was said. In its statement of principles the council urged that health programs be worked out in each county between the NYA and the county medical society, being adapted to local conditions. It was suggested that an organized follow-up program for correction of defects found in the physical examinations be deferred pending further conferences. Defects and deficiencies should be pointed out, however, and the youths should be encouraged to obtain medical attention through local facilities, the statement said. Reimbursement of the physicians who make the physical examinations is to be worked out jointly by the NYA and the medical society in each county, as is the plan of conducting the examinations.

PENNSYLVANIA

Society News.—Dr. Joseph F. Hughes, Philadelphia, addressed the Dauphin County Medical Society, Harrisburg, April 1, on "Etiology and Treatment of Convulsive States." ——Drs. Walter E. Lee, Jonathan E. Rhoads and William A. Wolff, Ph.D., Philadelphia, will address the Harrisburg Academy of Medicine, April 15, on "Burns: A New Concept and Treatment."

Philadelphia

University to Have Electron Microscope.—Plans to acquire an electron microscope for the Eldridge R. Johnson Foundation for Medical Physics were recently announced by the University of Pennsylvania. A grant from the American Philosophical Society has made possible the purchase of the instrument, which will be installed in the quarters of the foundation in the Maloney Clinic Building, probably by June. Members of the faculty who have been studying the virus of influenza by means of the electron microscope in cooperation with the R. C. A. Research Laboratories in Camden, N. J., will extend this line of investigation.

WISCONSIN

The William Snow Miller Lecture.—Dr. John H. Skavlem, Cincinnati, presented the fourteenth annual William Snow Miller Lecture of Phi Beta Pi at the University of Wisconsin Medical School, Madison, March 13. His subject was "Lest We Forget: The Importance of Dr. Miller's Anatomical Contributions in Clinical Diseases of the Chest."

State Society Spring Clinics.—The council on scientific work of the State Medical Society of Wisconsin has arranged the annual spring clinics to be presented in five centers: Ashland, April 28; Marshfield, April 29; Green Bay, April 30; West Bend, May 1, and Janesville, May 2. The speakers will be:

Dr. Edgar S. Gordon, Madison, Debunking Vitamins; Acceptable Endocrines.
Dr. Charles F. McKhann, Ann Arbor, Mich., Diagnosis and Management of Physical and Mental Defects of Childhood; Nutritional Feeding Problems.
Dr. Eben J. Carey, Milwaukee, The Female Pelvis; The Rectum.
Dr. Everett D. Plass, Iowa City, Prevention of Accidents in Pregnancy; Obstetrical Emergencies.
Dr. Albert H. Montgomery, Chicago, Value of Chemotherapy in Everyday Surgery; Diagnosis and Treatment of Hemorrhoids and Early Diagnosis of Malignancies of the Lower Bowel.

Plans are announced for dinner round table discussions with the guest speakers present to answer questions. Dr. Carey will be the general chairman and correlator of each meeting.

HAWAII

Health Activities in Hawaii.—The report of the board of health of the territory of Hawaii for the fiscal year 1940 shows the lowest death rate ever recorded for the islands, 7.18 per thousand of population. There were 3,025 deaths in a population of 423,332. The leading causes were heart disease, cancer, congenital malformation and diseases, tuberculosis and nephritis. The infant and mortality rates of 48.19 and 3.04 per thousand live births also set records. Pneumonia dropped from the second to the eighth leading cause of death, a change attributed in part to the use of serum and sulfapyridine, which the board distributed free to physicians for the medically indigent. The birth rate was 22.62 as compared with 21.79 in 1939. An outbreak of infantile paralysis occurred during the year, with 101 cases and ten deaths, an all-time record for the islands, the report said. The death rate from tuberculosis, a major problem in the territory, was 63.2 per hundred thousand of population, the lowest on record. A case of human plague resulting in death emphasized plague control measures, especially on the islands of Hawaii and Maui. Forty-seven cases of rodent plague were discovered on Hawaii, but there were 129 the previous year. The control program consisted mainly of eradicating rats and rat harborages. The appearance of 77 cases of typhus with one death also spurred intensive rat control measures. There were 56 cases of typhoid, attributed principally to the presence of carriers; no case was traced to milk or to the potable water supply. The bureau of sanitation made an industrial hygiene survey on Oahu, the first of its kind in the territory. The high percentage of raw milk consumed was an unsatisfactory situation, in view of the presence of tuberculosis and Brucella in local dairy herds. A new activity of the health department was the establishment of a bureau of mental hygiene. The bureau was an outgrowth of a survey made in 1937 by Dr. Franklin G. Ebaugh, Denver, under the sponsorship of local civic organizations. In 1938 the Hawaii Mental Health Clinic was established with funds provided by the chamber of commerce of Honolulu, and a year later the territorial legislature took over official sponsorship and responsibility for the work. The new bureau served 1,089 patients during its first year, of whom 667 were new. Of the total number 652 were outpatients and the remainder inpatients cared for in cooperation with Queen's Hospital. The bureau provided psychiatric consultation service to such agencies as industrial schools and the police department, and mental hygiene service to the department of public instruction. Dr. Marion F. Haralson, U. S. Public Health Service, was appointed territorial commissioner of health during the year to succeed Dr. Frederick E. Trotter, who died Aug. 7, 1939 after twenty years of service.

GENERAL

Sale of Seals for Crippled Children.—The National Society for Crippled Children is conducting its annual sale of Easter Seals from March 21 to April 13. This is the eighth annual campaign for funds by this society, which has headquarters in Elyria, Ohio.

Southern Obstetric Meeting.—Dr. Oren Moore, Charlotte, N. C., was named president-elect of the South Atlantic Association of Obstetricians and Gynecologists at its fourth annual convention in Jacksonville, Fla., recently, and Dr. Rudolph A. Bartholomew, Atlanta, became president. Dr. Robert A. Ross, Durham, N. C., was reelected secretary, and Atlanta was chosen as the place for the 1942 meeting. Guest speakers were Drs. John Rock, Boston; Nicholson J. Eastman, Baltimore, and William C. Young, Ph.D., associate professor of primate biology, Yale University, New Haven, Conn.

Cancer Control Month.—The President of the United States has again designated April as "Cancer Control Month" in a special proclamation. The President's statement set forth the many agencies now engaged in combating cancer and urged on the medical profession, scientific groups, the press, radio and motion picture industry, educators and civic leaders the importance of conveying educational information and "the necessity for eternal vigilance in this fight for humanity." The American Society for the Control of Cancer is carrying on an intensified educational campaign throughout the month.

Certifying Boards Become Independent.—The American Board of Anesthesiology and the American Board of Plastic Surgery, which have been affiliate or subsidiary boards of the American Board of Surgery, were advanced to the status of full and independent boards at a meeting of the Advisory Board for Medical Specialties in Chicago, February 16. There are now fifteen special certifying boards. Drs. Willard C. Rappleye, New York, and William P. Wherry, Omaha, were reelected president and vice president, respectively, of the Advisory Board for Medical Specialties. Dr. Paul Titus, Pittsburgh, who has been secretary-treasurer of the board since its inception in 1933, resigned that position and Dr. Clarence Guy Lane, Boston, was elected to succeed him.

Federation of Societies for Experimental Biology.—The Federation of American Societies for Experimental Biology will hold its annual meeting at the Stevens Hotel, Chicago, April 15-19. The federation is composed of the American Physiological Society, the American Society of Biological Chemists, Inc., the American Society for Pharmacology and Experimental Therapeutics, Inc., the American Society for Experimental Pathology and the American Institute of Nutrition. Nearly eight hundred papers will be presented at the meeting. Thursday there will be a joint meeting of the pathologists with the American Association of Immunologists. The Mead Johnson & Company "B Complex" Award will be presented at this meeting. The joint session of the federation will be held Thursday morning.

Obstetric Board Examinations.—Candidates for reexamination in Part II of examinations by the American Board of Obstetrics and Gynecology must make written application to the board before April 15, according to an announcement. The general oral and pathologic examinations (Part II) for all candidates will be conducted at Cleveland May 28 to June 2. Information and application blanks may be obtained from the secretary, Dr. Paul Titus, 1015 Highland Building, Pittsburgh. The board's annual dinner for diplomates and others interested in the work of the board will be held Wednesday evening, June 4, at the Wade Park Manor Hotel in Cleveland. Tickets at $3.25 each may be obtained from Dr. Joseph L. Baer, chairman, 104 South Michigan Avenue, Chicago, or at the registration desk during the examination period.

Fellowships in Tropical Medicine for Latin American Physicians.—The American Foundation for Tropical Medicine, Inc., announces the establishment of a limited number of fellowships for the postgraduate course in tropical medicine at the Tulane University of Louisiana School of Medicine, New Orleans, given each year beginning in September and continuing for four and a half months. These fellowships are available for young, duly qualified physicians who are citizens of the republics of Mexico, Central and South America. In addition to the tuition fee which will be met by the foundation, each fellowship will provide $700 for travel and maintenance. Applications should be sent to the director of the Department of Graduate Medicine, Tulane University of Louisiana School of Medicine, 1430 Tulane Avenue, New Orleans. Completed application forms will be submitted to the council of the American Academy of Tropical Medicine, who will make the awards.

The Francis Hagner Memorial.—A committee has been formed to establish the Francis R. Hagner Library as a memorial to the late Dr. Francis R. Hagner, at the time of his death in 1940 professor emeritus of genitourinary surgery at George Washington University School of Medicine, Washington, D. C. The library will be at Garfield Memorial Hospital, where Dr. Hagner served as a member of the staff for many years. Funds are being received by Miss Margery L. Powderly, secretary-treasurer of the Francis Randall Hagner Memorial Committee, 1718 M Street N.W., Washington. The names of the contributors will be recorded in a suitable volume to be preserved in the library, although the amounts donated will not be indicated. Dr. Hagner graduated in 1894 at Columbian University Medical Department, now known as George Washington University School of Medicine, where he served from 1905 until 1939 as professor of genitourinary surgery. He was made professor emeritus in 1939. Dr. Hagner once served as president of the Medical Society of the District of Columbia, the American Association of Genito-Urinary Surgeons and the Clinical Society of Genito-Urinary Surgeons.

Editorial Board for Infectious Disease Journal.—Starting with its January-February issue, the *Journal of Infectious Diseases* will be published by the University of Chicago Press under the direction of a newly appointed board of editors, with William H. Taliaferro, Ph.D., Eliakim H. Moore distinguished service professor of parasitology and chairman of the department of bacteriology and parasitology and dean of the Division of Biological Sciences, University of Chicago, as editor in chief. Dr. Ludvig Hektoen, editor of the journal since its founding in 1904, has retired from active participation. Dr. Francis B. Gordon, assistant professor of bacteriology, University of Chicago, is the managing editor. Advisory editors are William Burrows, Ph.D., R. Wendell Harrison, Ph.D., Clay G. Huff, Sc.D., Stewart A. Koser, Ph.D., Drs. Charles Phillip Miller, Harry Gideon Wells and G. M. Dack, all of Chicago; Karl F. Meyer, Ph.D., San Francisco, and Dr. Frederick G. Novy, Ann Arbor, Mich. The journal is published bimonthly. It was established in 1904 by the John Rockefeller McCormick Memorial Institute for Infectious Diseases.

Drug Firms Indicted.—The U. S. Department of Justice announced March 31 that a federal grand jury sitting in Washington, D. C., had returned an indictment charging three drug manufacturers and seven of their officers with violations of sections 1 and 3 of the Sherman Act.

The defendants, each of which is named in the two counts of the indictment, are Eli Lilly and Company, Indianapolis, Sharp & Dohme, Inc., Philadelphia, and E. R. Squibb and Sons, New York; and Eli Lilly, president, Charles J. Lynn, vice president, and Earl S. Retter, director of the merchandising division of Eli Lilly and Company; John S. Zinsser, president, and Eugene Hugh Long, vice president of Sharp & Dohme, Inc.; Carleton H. Palmer, chairman of the board of directors, and John F. Anderson, vice president of E. R. Squibb and Sons.

The indictment alleges that the defendants unlawfully combined and conspired to bring about arbitrary, uniform and noncompetitive prices for insulin to prevent free and normal competition in the sale thereof throughout the United States, and generally to restrain the trade therein.

The indictment charges that insulin is one of the largest selling products in the drug and pharmaceutic trade, that a constant supply is vital to the well-being of the more seriously affected diabetic patients throughout the United States and that a substantial number of them require one or more daily injections of insulin.

The indictment further charges that arbitrary, uniform and noncompetitive prices were fixed not only on drug sales of insulin direct to retailers, private hospitals, state, county and city institutions and the federal government but also on resales by wholesalers and distributors and by retailers.

According to the indictment the defendants decided who should be appointed as distributors, investigated the failure of any dealer to adhere to price schedules fixed by the defendants, reported among themselves violations of the price schedules, and induced dealers to adhere to such schedules by various means, including refusals to sell and threats of such refusals, refusals to allow handling charges, and by the use of contracts requiring fixed resale prices.

The investigation which led to the present indictment was conducted by the antitrust division of the Department of Justice. Officials of the division stated that the present indictment is a part of the program of examination into all the elements of the cost of living and the prosecution of cases when the evidence warrants.

The case was in charge of Kenneth L. Kimble, special assistant to the Attorney General, assisted by George W. Wise, special assistant to the Attorney General, and Walter D. Murphy, special attorney.

Government Services

Internships in Naval Hospitals

Examinations for appointments as acting assistant surgeon for intern training at U. S. Naval Hospitals will be held June 23-26, inclusive, at all the larger naval hospitals in the continental limits of the United States, according to an announcement from the Surgeon General of the Navy, Rear Admiral Ross T. McIntire. Application for authorization for these examinations should be forwarded to the Bureau of Medicine and Surgery on or before May 23. Legislation recently enacted by Congress makes it possible to offer an additional large number of these appointments, the announcement said. Applicants must be citizens of the United States over the age of 21 but less than 32 at the time of appointment, must be graduates or members of the graduating class of recognized medical schools and must meet the physical and other requirements for such appointments. All candidates will be notified of the results of the examination approximately six weeks after the date of the examination, and successful candidates will receive their appointments approximately two months from the date of the examination. Appointments as acting assistant surgeon with the rank of lieutenant (junior grade) for temporary service for a period of not more than eighteen months will be issued. After the appointee has served twelve months of intern training he may apply for appointment as lieutenant (junior grade) in the Medical Corps, U. S. Navy. Information concerning these appointments together with application blanks may be obtained by addressing the Bureau of Medicine and Surgery, Navy Department, Washington, D. C.

Announcement on Civil Service Positions Amended

A recent announcement from the U. S. Civil Service Commission asking for applications for the positions of senior medical officer, medical officer and associate medical officer has been amended for the second time to add to the optional branches for the grade of senior medical officer "Public Health (General)." A previous amendment published in THE JOURNAL, March 15, page 1174, added to the optional branches for the medical officer and associate medical officer "diagnosis and treatment of cancer." These positions are to be filled in the U. S. Public Health Service and the Food and Drug Administration in the Federal Security Agency; the Veterans' Administration, Civil Aeronautics Administration in the U. S. Department of Commerce and the Indian Service in the U. S. Department of the Interior. Applications must be filed with the U. S. Civil Service Commission, Washington, D. C. They will be rated as received and certification made as the needs of the service require. When sufficient eligibles are obtained, the receipt of applications will be closed, in which case due notice will be given. A subsequent application will not be accepted from any applicant within three months of the date of receipt of his preceding application under this announcement, it was stated.

Foreign Letters

LONDON

(From Our Regular Correspondent)

Feb. 8, 1941.

Health in War Time

The air attacks on towns and cities and the absorption of all who are available of the young of both sexes into the fighting services has made a vast change in our way of life and produced new dangers to health, of which the most pronounced is that a large proportion of the population spends the night in crowded air raid shelters. But Sir William Jameson, chief medical officer of the Ministry of Health, presents a satisfactory report on the health of the nation. He states that in the crowded deep shelters, which the ministry regards as the danger spots, only stray cases of infectious disease occur and no outbreak has been reported in any of them. In the London shelters, observations by physicians and nurses have not disclosed any spread of body vermin. The best safeguard against the spread of disease by lice is declared to be frequent washing and change of clothes. The notifications of the chief infectious diseases for three years given in the table enable a not unsatisfactory comparison to be made with prewar conditions.

Infectious Diseases Reported in Last Three Years

	1938	1939	1940
Scarlet fever	99,000	76,000	63,000
Diphtheria	65,000	46,700	44,000
Pneumonia	45,000	42,000	46,000
Dysentery	4,170	963	2,900
Enteric fever	1,390	1,500	2,800
Cerebrospinal fever	1,288	1,500	12,500

The 46,000 cases of pneumonia last year are not considered unduly serious in view of the extremely severe weather in the early months. Most of the enteric cases were paratyphoid and not the old fashioned severe typhoid. Even from places severely bombed, no case of typhoid has been reported. Cerebrospinal fever is a special danger of war. In the past the mortality has been about 60 per cent but now, thanks to sulfapyridine, it has fallen to 5 per cent, including malignant cases, which used to prove fatal within twenty-four hours. In the view of the ministry the sovereign preventive of these infectious diseases is dispersal from overcrowded areas and dispersal within the shelters by giving the sleepers bunks and encouraging them not to lie too close together. The wearing of masks in the shelters is strongly recommended.

Problems in Active Immunization

Presiding at a discussion in the Section of Therapeutics of the Royal Society of Medicine, Sir William Willcox said that, in view of possible pollution of water supplies in air raids by the bursting of mains, the blasting of dust into the bodies of the injured and the crowding of people into shelters, the importance of immunization was rendered greater.

Dr. H. J. Parish said that immunization against diphtheria was safe and effective but that the bulk of the child population had not been reached. He had always advocated two doses of alum precipitated toxoid separated by a month's interval, but he had recently advised the medical officer of an industrial concern with many young employees to use a milder antigen in three doses separated by periods of a fortnight. Damage to water mains and sewers and the improvization of toilet arrangements in air raid shelters produced a serious risk of epidemics of typhoid. Mass immunization was desirable in many areas, although there was no justification for compulsion except for certain wholesale food operatives and people exposed to certain risks. A year ago much more importance would have been attached to tetanus prophylaxis, but the incidence of tetanus in this war had been negligible. Members of the land army and air raid precaution workers might be immunized with toxoid, but mass immunization of the population was not advised. Antitetanus serum should be given early to all wounded persons. Two doses of toxoid, separated by six weeks, gave good immunity.

We might have to pay dearly for not making vaccination against smallpox compulsory. Infection by virulent strains from the continent might tax the resources of our public health services. Whooping cough immunization might be indicated for the individual. The large number of injections usually recommended was a deterrent. Research into the possibility of fewer doses and wider spacing was indicated. For measles, methods of active immunization were not sufficiently advanced for the present emergency. Scarlet fever was fairly mild, but active immunization of hospital staffs was important. The success of chemotherapy in cerebrospinal meningitis had removed the need for meningococcus vaccine. In Shiga dysentery formaldehyde toxoid could be made available for human immunization and research to this end was now in progress.

A warning should be given to those who neglected the usual precautions of sterilizing syringes and needles and maintained that they never had a case of sepsis. Many sore arms ascribed to prophylactics were due to infection. A grave risk was incurred if instruments were not sterilized by heat. Far too many physicians relied on alcohol as a disinfectant. One set of syringes and needles should be used solely for inoculations, another for withdrawal of pathologic fluids. For each injection a fresh sterile needle should be used.

The Care of Bombed Animals

An organization for the protection and care of domestic animals in London almost as elaborate as that provided for their owners has been created. It has rescuers specially equipped to dig them out of ruined buildings, wardens to enter areas made dangerous by delayed action bombs and bring out animals, ambulances, first aid centers, hospitals and temporary rest homes where those for which homes have been found in the country can stay until ready to travel.

From September to December forty-seven thousand pets (dogs, cats, caged birds, rabbits and one or two monkeys) were rescued. In addition, one hundred horses have been saved from burning stables. During raids the staff frequently receives messages from the police or wardens telling them where animals are trapped. Most of the workers are women trained to treat animals for shock and superficial wounds. They take not only the risk of entering damaged buildings but also that of bites from terrified cats and dogs.

Herbert Tilley: A Foremost Laryngologist

The death of Mr. Herbert Tilley at the age of 74 has removed one of the last of the pioneers who established laryngology as a specialty in this country and one whose work was known in Europe and America. After a brilliant career as a student at University College Hospital he engaged in general practice in London. When a department for the diseases of the throat and ear was established at University College he was selected to take charge. His contributions to laryngology were mainly clinical. Perhaps his most important work was on the nasal sinuses, done at a time when little was known of their diseases. His work on the prognostic significance of the fixed vocal cord is well known. He was president both of the Section of Laryngology and the Section of Otology of the Royal Society of Medicine and a member of the American Laryngological Society. He was the author of "Diseases of the Throat and Nose."

AUSTRALIA

(From Our Regular Correspondent)

Dec. 20, 1940.

Pregnancy and Parturition in the D'Entrecasteaux Islands

The inhabitants of the D'Entrecasteaux Islands, a small mountainous group lying some 50 miles to the east of Papua, have for many years had contact with Europeans, but this has not been such as to modify their customary practices with regard to medicine and obstetrics. Edward Ford, from the School of Public Health and Tropical Medicine, Sydney, recently collected notes during a tour of duty through the group.

Unlike the neighboring Trobriand Islanders, who believe that procreation is a process of spirit reincarnation wholly dissociated from coitus, the natives of the D'Entrecasteaux group well recognize the function of the male in conception. They understand that pregnancy follows as a direct result of coitus, although it does not necessarily do so, and they usually hold that a succession of acts of intercourse are necessary to effect it. The clearness of their views is remarkable when the unshakable assurance of their Trobriand neighbors in the complete absence of association between coitus and pregnancy is considered. Their physiologic understanding, says Ford, rests on the basis of that sound knowledge of human anatomy which, gained from the dissection of bodies in the preparation of food, is frequently found in cannibal peoples. The Trobriand Islanders were not cannibals.

Menstruation is generally regarded as being related to pregnancy, and the menstrual rhythm is held to be influenced by the moon. The menopause is known to mark the end of child bearing, and in most places a woman is thereafter termed an "old woman."

A resemblance to both parents is sought in a new-born child, showing that both parents are allotted a part in its creation. In the Trobriands, on the contrary, a paternal resemblance in a child is denied, however obvious it may appear.

Pregnancy is first diagnosed by amenorrhea and changes in the breasts, although the caution is provided that, while pregnancy may be suspected at the first absence of the menses, yet a woman must remain uncertain until about four menstrual periods have been missed. Menstrual irregularity due to severe anemia as a result of malaria or hookworm infection or both probably accounts for this. In most places, cohabitation ceases from the time pregnancy becomes evident until the baby is weaned. This restriction, which is carefully observed, at times causes dissatisfaction, which is said to lend occasionally to abortion or infanticide. Otherwise there is little change in the life of the pregnant woman, who continues her usual house and garden tasks as before.

It is considered disgraceful for an infant to be born to a single girl; but although sexual freedom exists among young unmarried people pregnancy rarely eventuates even though puberty has been established. The infrequency of illegitimate children is usually regarded by white persons as due to the practice of abortion, yet this does not seem to be an important factor. Since marriage usually occurs early, within at least a few years of puberty, the facts appear to support the view that, after the advent of puberty, there normally occurs a sterile period and that ovulation and its associated processes do not normally develop until some time after the onset of puberty. It is impossible to estimate just to what extent abortion is practiced, though it is probably not very prevalent. Details of the methods used are regarded as women's secrets and are not divulged to the men. Herbal concoctions are said to be widely used, both as abortifacients and as contraceptives, though little faith is placed in their efficacy.

No man is allowed to witness any part of parturition. At the approach of labor it is usual for a husband to leave the house and live apart for a while. When labor pains begin, female relatives of the woman prepare for the event. In all parts of the archipelago, apparently, the same procedure is adopted. The woman sits on the floor of the hut on a flat stone and is attended by one woman who sits behind her, supporting her by the hips, and by others at the sides who keep her knees flexed and separated. Another woman kneels in front and watches the progress of the head. When the head is on the perineum she may separate the labia, but no further manipulations occur and the infant is not touched until it is finally expelled on a mat placed ready to receive it.

Delivery is usually easy, with a short second stage. The infants are generally small—about 5 or 6 pounds (2.3 to 2.7 Kg.). No treatment is known for the complications of labor, and cases of obstruction are regarded as hopeless and death is awaited. The same helplessness applies in cases of retained placenta and severe postpartum hemorrhage, the application of heat being the only treatment used for these complications. After delivery the infant is washed in warm water or, in the coastal districts, bathed in the sea. It is put to the breast as soon as it will suck. Breast feeding is continued for varying periods, usually till the teeth appear. From an early age infants are given small amounts of gravy from the cooking pots, and yam and fish soups, and later suck pieces of solid food, as yam, taro and banana. No food apart from the adult diet is available after weaning. The result of this is reflected in the poor general appearance of children from the time of weaning till the age of about 5 years, when the bulky diet of starchy food appears to be better assimilated.

If a woman died in childbirth, it was formerly customary for her live infant to be buried with her, and that practice probably still exists in many parts. The absence of any suitable infant food apart from the milk of another mother and the difficulty of providing for wetnursing would render the rearing of the bereaved infant most difficult, especially in time of food shortage, and apparently gave rise to the custom. Also it is freely admitted that deformed infants are not reared but are quietly buried at birth.

Marriages

JOHN WARREN MONTAGUE, Richmond, Va., to Miss Mary Adelaide Walton of Morganton, N. C., January 4.

HARWELL WILSON, Memphis, Tenn., to Miss Helen Evertson Cobb of Pasadena, Calif., in Chicago, January 18.

ROY MEADOWS SMITH, Greensboro, N. C., to Miss Emily Haywood Worth of Jefferson in December 1940.

THOMAS CLARKSON WORTH, Raleigh, N. C., to Miss Barbara Donaldson Luther of Olean, N. Y., January 4.

GEORGE F. KOWALLIS, Rochester, Minn., to Miss Mary Virginia Hancock of Akron, Ohio, January 4.

FLOYD ARTHUR POTTER, Toledo, Ohio, to Miss Mary Annette Stevens in St. Petersburg, Fla., January 1.

JOHN LAWSON STAPLETON, Columbus, Ga., to Miss Grace Lloyd of Hurtsboro, Ala., January 12.

WILLIAM PARKER LEONARD JR., Talbotton, Ga., to Miss Mary Cary Maynard of Atlanta, January 15.

JOHN WREN REA to Miss Muriel Cecelia Bondurant, both of Memphis, Tenn., January 11.

ALLEN JAMES HANNEN to Miss Helen Manson, both of Williamsport, Pa., January 22.

GEORGE N. BALLENTINE to Miss Molly White, both of Williamsport, Pa., January 22.

ALBERT M. DEAL, Statesboro, Ga., to DR. HELEN READ of Holyoke, Mass., January 18.

EDWARD SHEEHAN ARMSTRONG to Miss Catherine Pope, both of Augusta, Ga., January 2.

WILLIAM STANLEY GARNER to Miss Mary Jane Kemp, both of Indianapolis, January 11.

Deaths

William Henry Walsh ● Chicago; Medico-Chirurgical College of Philadelphia, 1909; in the hospital corps of the United States Army during the Philippine Insurrection, 1899-1900; chief sanitary inspector of the Insular Bureau of Health of the Philippine Islands from 1900 to 1904; acting assistant surgeon in the United States Public Health Service from 1909 to 1911; superintendent of the Philadelphia Hospital for Contagious Diseases from 1912 to 1914; chief resident physician at the Philadelphia General Hospital in 1914; medical director of the Philadelphia Children's Hospital from 1914 to 1916; executive secretary of the American Hospital Association from 1916 to 1918 and from 1924 through 1927; secretary of the hospital board of the United States Public Health Service, 1919-1920; served as hospital consultant in various countries; consultant, Chicago Health Department; during the World War served as a major on the staff of the surgeon general of the army and as commandant of base hospital number 58 at Camp Grant, Ill., and in France with the rank of lieutenant colonel; member of the Medical Society of the State of Pennsylvania, American Association of Industrial Physicians and Surgeons, Association of Military Surgeons and the American Public Health Association; fellow of the American College of Physicians; aged 59; died, March 28, in the Albert Merritt Billings Hospital of carcinoma of the stomach.

William Webber Ford ● Boston; Johns Hopkins University School of Medicine, Baltimore, 1898; member of the Medical and Chirurgical Faculty of Maryland; joined the faculty of his alma mater in 1903 and served subsequently as instructor in bacteriology, associate in bacteriology and associate professor of hygiene and bacteriology and lecturer in legal medicine; was associate professor of bacteriology from 1918 to 1922 and professor from 1922 to 1937, when he retired as professor emeritus of bacteriology at the Johns Hopkins University School of Hygiene and Public Health; a member of the state board of health of Maryland from 1913 to 1935; author of a textbook entitled "Bacteriology"; aged 69; died, February 10, in the Johns Hopkins Hospital, Baltimore, of carcinoma of the colon.

Frank Wilson Lamb ● Portland, Maine; Medical School of Maine, Portland, 1895; member of the American Roentgen Ray Society, New England Roentgen Ray Society, Radiological Society of North America and the American College of Radiology; on the staffs of the Children's Hospital, State Street Hospital and the Queen's Hospital, Portland, and the Webber Hospital, Biddeford; consulting roentgenologist, Maine General Hospital; aged 68; died, January 20, of coronary thrombosis.

Russell Ransom Welch, Jackson, Miss.; Tulane University of Louisiana School of Medicine, New Orleans, 1908; member of the Mississippi State Medical Association; formerly superintendent of the East Mississippi State Hospital, Meridian, and assistant superintendent of the state insane hospital, Jackson; owner and medical director of a sanatorium bearing his name; aged 56; died, January 21, in the Mississippi Baptist Hospital of carcinoma of the lung.

Charles Dennis Mitchell, Whitfield, Miss.; Memphis (Tenn.) Hospital Medical College, 1888; member, past president and vice president of the Mississippi State Medical Association; past president of the Southern Psychiatric Association; member of the American Psychiatric Association; formerly a member and past president of the state board of health; for many years superintendent of the Mississippi State Hospital; aged 74; died, January 25.

J. Roy Burlington ● Attica, Ind.; Central College of Physicians and Surgeons, Indianapolis, 1897; past president of the Fountain-Warren Counties Medical Society; president of the Ninth Councilor District in 1940; served during the World War; for many years a member of the board of health of Attica; formerly county coroner; aged 65; died, February 2, in St. Elizabeth Hospital, Lafayette, of cerebral hemorrhage.

Charles Gabriel Levison, Sausalito, Calif.; Cooper Medical College, San Francisco, 1889; member of the California Medical Association; fellow of the American College of Surgeons; past president of the San Francisco County Medical Society; served during the World War; formerly on the staff of Mount Zion Hospital, San Francisco; aged 75; died, January 12.

Daniel Voorhees McClary, Evansville, Ind.; Hospital College of Medicine, Louisville, Ky., 1896; member of the Indiana State Medical Association; served during the World War; aged 73; on the board of managers of the Welborn Walker Hospital, where he died, January 31, of acute dilatation of the heart following a prostatectomy.

Herbert Sidney Langsdorf ● St. Louis; Washington University School of Medicine, St. Louis, 1915; past president of the St. Louis Medical Society; served during the World War; on the staffs of the Lutheran, De Paul, City and St. Anthony's hospitals; aged 48; died, January 16, of coronary thrombosis.

Valentine R. Manning ● Philadelphia; Medico-Chirurgical College of Philadelphia, 1902; member of the National Gastro-enterological Association; medical examiner for draft board number 23; on the staffs of St. Mary's, St. Joseph's and Nazareth hospitals; aged 59; died, January 8, of coronary occlusion.

Charles Richard Bates ● Ladd, Ill.; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1908; served during the World War; secretary of the Bureau County Medical Society; aged 56; died, February 19, of bacterial endocarditis and dental infection.

Daniel Seymour MacArthur, La Crosse, Wis.; Rush Medical College, Chicago, 1884; member of the State Medical Society of Wisconsin; formerly secretary of the La Crosse County Medical Society; aged 81; died, January 3, in St. Francis Hospital of bronchopneumonia.

John Oenslager Jr., Harrisburg, Pa.; University of Pennsylvania Department of Medicine, Philadelphia, 1894; member of the Medical Society of the State of Pennsylvania; formerly on the staff of the Harrisburg Hospital; aged 72; died, January 28, of arteriosclerosis.

Edward W. Wiltse, Modale, Iowa; Omaha Medical College, 1893; member of the Iowa State Medical Society; at various times town health officer and school physician; aged 79; died, January 25, in the Jennie Edmundson Hospital, Council Bluffs, of uremia.

Paul Eugene Leahy, Sioux City, Iowa; Loyola University School of Medicine, Chicago, 1933; member of the Iowa State Medical Society; on the staff of St. Vincent's Hospital; aged 36; died, January 22, in Valentine, Neb., of injuries received in an automobile accident.

Elmer Mark Antony Sizer ● Rio Hondo, Texas; Chicago Homeopathic Medical College, 1894; formerly secretary of the Cameron County Medical Society; aged 73; died, January 30, in the Valley Baptist Hospital, Harlingen, of injuries received in an automobile accident.

Walter Scott Bennett, Elizabeth, Colo.; Denver and Gross College of Medicine, 1909; member of the Colorado State Medical Society; served during the World War; aged 56; died, January 31, in the Fitzsimons General Hospital, Denver, of bronchogenic carcinoma.

William Jonathan Lein, Greystone Park, N. J.; University of Vermont College of Medicine, Burlington, 1901; member of the American Psychiatric Association; formerly on the staff of the New Jersey State Hospital; aged 68; died, January 30, of carcinomatosis.

Charles Leland McVey, Oakland, Calif.; University of California Medical Department, San Francisco, 1909; member of the California Medical Association; on the staffs of the Peralta and Merritt hospitals; aged 57; died, January 28, of coronary occlusion.

William Raymond Williamson, Fort Wayne, Ind.; University of Michigan Homeopathic Medical School, Ann Arbor, 1907; aged 60; resident physician to the Irene Byron Sanatorium, where he died, January 2, of chronic myocarditis and macrocytic anemia.

George R. Howard ● Palestine, Texas; Tulane University of Louisiana School of Medicine, New Orleans, 1890; assistant superintendent of the Austin (Texas) State Hospital from 1926 to 1938; aged 81; died, January 25, of myocarditis and pleural effusion.

Jacob Heller, Buffalo; University of Buffalo School of Medicine, 1914; member of the Medical Society of the State of New York; served during the World War; aged 49; died, January 19, in the Buffalo General Hospital of cerebral hemorrhage.

Clarence Wayne Rogers, Rineyville, Ky.; Kentucky School of Medicine, Louisville, 1891; member of the Kentucky State Medical Association; aged 75; died, January 29, in St. Anthony's Hospital, Louisville, of an acute condition of the gallbladder.

Grant Frederick Glassbrook ● Albany, N. Y.; Albany Medical College, 1924; instructor in medicine at his alma mater; assistant attending physician, Albany Hospital; aged 48; died, January 30, of chronic myocarditis and coronary sclerosis.

Adolphus Lamar Little, New Orleans; University of Maryland School of Medicine, Baltimore, 1910; served during the World War; medical examiner for the Veterans Administration; aged 56; died, January 7, of coronary occlusion.

Edward Francis Leonard ● Paterson, N. J.; Georgetown University School of Medicine, Washington, D. C., 1924; aged 42; on the staff of St. Joseph's Hospital, where he died, January 27, of intestinal obstruction due to adhesions.

Robert Arthur Waite ● Waukesha, Wis.; Wisconsin College of Physicians and Surgeons, Milwaukee, 1902; physician of the International Harvester Company; aged 63; died, January 29, in Milwaukee of carcinoma of the pancreas.

Joseph Searle McDede ● Jersey City, N. J.; College of Physicians and Surgeons, Baltimore, 1905; member of the National Gastroenterological Association; aged 67; died, January 28, in the Medical Center of uremia.

Franklin Pierce, Norfolk, Va.; College of Physicians and Surgeons, Baltimore, 1875; formerly member of the state legislature; aged 87; died, January 18, in the Municipal Hospital of bronchopneumonia and arteriosclerosis.

Florence Radinoff Kramer, Lynn, Mass.; Loyola University School of Medicine, Chicago, 1918; member of the Massachusetts Medical Society; aged 57; died, January 13, in Miami Beach, Fla., of coronary thrombosis.

Samuel Duff Anderson, Littleton, Ill.; University Medical College of Kansas City, Mo., 1908; formerly a minister; aged 81; died, February 17, in the Culbertson Hospital, Rushville, of arteriosclerosis and heart disease.

William Howard Sharp ● Woodstock, Ohio; Starling Medical College, Columbus, 1904; served during the World War; president of the county board of health; aged 63; died, January 30, of heart disease.

Malcolm James McCallum, Fairfield, Conn.; Baltimore Medical College, 1901; Southern Homeopathic Medical College, Baltimore, 1902; aged 62; died, January 3, of pulmonary embolism and mitral stenosis.

Delta Eulilla Rowland ● Sunnyside, Wash.; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1912; health officer; aged 57; died, January 1, of pneumonia.

Robert George Noble, Bexley, Ohio; Starling Medical College, Columbus, 1907; served during the World War; aged 60; died, January 28, in the Mount Carmel Hospital, Columbus, of coronary occlusion.

Stanton Perry Hull ● Troy, N. Y.; Albany Medical College, 1908; health officer and formerly member of the New York State Public Health Council; aged 54; died, January 24, of lobar pneumonia.

Riley C. Van Hook, Norene, Tenn.; University of Tennessee Medical Department, Nashville, 1893; aged 71; died, January 28, in a hospital at Lebanon of chronic fibroid pulmonary tuberculosis.

Joseph Jacob Levy ● Los Angeles; Medico-Chirurgical College of Philadelphia, 1905; aged 59; died, January 8, in the Veterans Administration Facility of ruptured diverticulum and acute peritonitis.

Paul Burke Cooper ● Portland, Ore.; Northwestern University Medical School, Chicago, 1908; fellow of the American College of Surgeons; aged 60; died, February 23, in an automobile accident.

Henry Grant Lind, Edinburg, Ind.; University of Virginia Department of Medicine, Charlottesville, 1907; veteran of the Spanish-American War; aged 59; died, January 21, of tumor of the brain.

Ebenezer Payne, Glendora, Calif.; University of Michigan Homeopathic Medical School, Ann Arbor, 1904; aged 76; died, January 26, in the Seaside Hospital, Long Beach, of heart disease.

Charles Virgil Lynch, Milwaukee; Marquette University School of Medicine, Milwaukee, 1926; aged 39; died, January 19, in the Misericordia Hospital of duodenal hemorrhage and ulcer.

John M. Liggitt ● Farnam, Neb.; Starling Medical College, Columbus, 1897; formerly served in the Indian Service; aged 68; died, Dec. 12, 1940, in Gothenburg of coronary thrombosis.

John B. Ludwig ● Lemont, Ill.; Bennett College of Eclectic Medicine and Surgery, Chicago, 1893; aged 74; died, January 30, in the Silver Cross Hospital, Joliet, of cerebral hemorrhage.

James A. Otwell, Cumming, Ga.; Atlanta College of Physicians and Surgeons, 1906; for many years chairman of the school board; aged 57; died, January 24, of heart disease.

Samuel M. Landsman ● New York; College of Physicians and Surgeons; medical department of Columbia College, New York, 1889; aged 74; died, January 10, of heart disease.

Albert John Kimmons, Bristol, Tenn.; Vanderbilt University School of Medicine, Nashville, Tenn., 1901; veteran of the Spanish-American War; aged 63; died, January 6.

Lawrence Coffin, Tucson, Ariz.; Long Island College Hospital, Brooklyn, 1889; aged 83; died, January 28, in Cabazon, Calif., of injuries received in an automobile accident.

Charles Rea ● York, Pa.; Medico-Chirurgical College of Philadelphia, 1894; aged 68; on the staff of the York Hospital, where he died, January 26, of cerebral thrombosis.

Henry Adrian Brady, Lithia, Fla.; Medical College of Virginia, Richmond, 1908; served during the World War; aged 55; died, January 25, of coronary thrombosis.

John George M. Luttenberger ● Chicago; Barnes Medical College, St. Louis, 1906; aged 77; died, January 7, at the Illinois Masonic Hospital of cardiac decompensation.

James Wilcox Wilson, Madison, N. J.; Bellevue Hospital Medical College, New York, 1898; aged 72; died, January 22, of cerebral hemorrhage and arteriosclerosis.

Calvin Jackson Ulrich, Des Moines, Iowa; College of Physicians and Surgeons, Keokuk, Iowa, 1882; also a lawyer; aged 81; died, January 13, of thrombosis.

Henry Clinton MacSherry, Baltimore; University of Maryland School of Medicine, Baltimore, 1872; aged 89; died, January 9, of inguinal hernia.

Edward C. Kitchen, St. George, Ont., Canada (registered to practice medicine in Ontario in 1877); aged 84; died, January 1, of arteriosclerosis.

Miles A. Kirk, Bellefonte, Pa.; Eclectic Medical Institute, Cincinnati, 1877; aged 85; died, January 15, of arteriosclerosis and cerebral hemorrhage.

Frederick August Eggersman, Staten Island, N. Y.; Eclectic Medical College of the City of New York, 1887; aged 83; died, January 23.

John H. Maxwell, Martinsville, Ind.; Medical College of Indiana, Indianapolis, 1897; aged 79; died, January 10, of cerebral hemorrhage.

A. V. Harrington, Titusville, Fla. (licensed in West Virginia under the Act of 1881); aged 72; died, January 10, of heart disease.

Mortimer Daniel Cure ● Weston, W. Va.; Baltimore Medical College, 1901; aged 73; died, January 1, of cerebral hemorrhage.

William Clinton Burchfield, Miami Shores, Fla.; University of Pittsburgh School of Medicine, 1912; aged 63; died, January 29.

James Winfield Rush, Toronto, Ont., Canada; University of Toronto Faculty of Medicine, 1920; aged 47; died suddenly, January 17.

Alice K. Koogle, Los Angeles; Columbian University Medical Department, Washington, D. C., 1894; aged 73; died, January 7.

Franklin Hanna, Brantford, Ont., Canada; McGill University Faculty of Medicine, Montreal, Que., 1879; aged 84; died, January 9.

Alexander Edward Kennedy, Mabou, N. S., Canada; College of Physicians and Surgeons, Baltimore, 1893; died, January 8.

William Edwin Hawkins, Bayou Chicot, La.; Jefferson Medical College of Philadelphia, 1882; aged 80; died, January 23.

Randall Davis Blackshear, Panama City, Fla.; Kentucky School of Medicine, Louisville, 1892; aged 79; died, January 20.

T. J. Hatchett, Raleigh, Ga.; Atlanta Medical College, 1891; aged 74; died, January 12, of cardiorenal disease.

Benjamin P. Hall, Richwood, Ohio; Starling Medical College, Columbus, 1882; aged 85; died, January 27.

Cyrus F. Crosby, Heber Springs, Ark. (licensed in Arkansas in 1903); aged 73; died, January 25.

Council on Medical Education and Hospitals

ANNUAL CONGRESS ON MEDICAL EDUCATION AND LICENSURE

Thirty-Seventh Annual Meeting, Held in Chicago, Feb. 17 and 18, 1941

DR. RAY LYMAN WILBUR, Stanford University, Calif., in the Chair

COUNCIL ON MEDICAL EDUCATION AND HOSPITALS

FEBRUARY 17—MORNING

Report of the Council on Medical Education and Hospitals

DR. RAY LYMAN WILBUR, Stanford University, Calif.: This article appeared in full in THE JOURNAL, February 22, page 661.

The Contribution of Liberal Education to Professional Studies

OLIVER C. CARMICHAEL, LL.D., Nashville, Tenn.: This article appeared in full in THE JOURNAL, March 22, page 1325.

Universities and the People's Health

DR. RAYMOND B. ALLEN, Chicago: University medical establishments have largely assumed the responsibility for the fundamental education and training of the health personnel of the country. Colleges of medicine, dentistry, pharmacy and veterinary medicine and schools of public health have developed as integral parts of university systems. These colleges have to a large degree developed independently with varying degrees of coordination among them. The increasing interdependence of these disciplines is generally recognized, and steps are being taken to implement the need for more active cooperation and coordination of effort.

The university's primary responsibility in the health program of the country is to provide an educated and trained personnel possessing the necessary qualities of personality and character to meet fully the responsibilities of the professions they serve. This means that universities and licensing boards share the responsibility for the selection of persons possessing the essential intellectual and personal qualifications. Universities, therefore, must be concerned to keep the channels open for all qualified students, and especially for gifted, superior students, from secondary schools to undertake higher education in colleges and professional and graduate schools. There is evidence that in making a choice for a life work many promising students fail to be attracted to professional fields because of insufficient financial means for a lengthy education and of inadequate information concerning the requirements, opportunities, responsibilities and promise for satisfying careers. Many students of outstanding ability do not receive the advantages of university experience for reasons beyond their control. This represents a great loss in talent which the commonwealth can ill afford. The expanding opportunities for intellectual improvement, advancement and professional standing in the several health professions should be made more widely known to youth, and superior students from families with small incomes should be supported by adequate scholarships.

Numerous smaller professional groups serve the health needs of the people in various ways. Various interprofessional councils and societies are approaching on common ground the many unsolved problems of articulation between their respective areas of service. The physician, psychiatrist, psychologist, sociologist and others have focused attention on environmental factors leading to a breakdown in the health of the individual. There is widespread realization of the importance of the industrial and social environment to the health of the people. The contributions of medicine and engineering to industrial health through scientific control of industrial hazards of all kinds are examples of the far reaching effects of collaboration between management, labor, engineering, medicine and government in improving working conditions of the people.

Universities as centers of inquiry into the underlying causes and forces which shape the civilization of the day share with the government the high responsibility of research and study to understand better the breakdowns in the processes of civilized intercourse between peoples and nations. It is not the function of the university to enter the political arena to seek solutions for specific problems. One of its functions, however, is to serve the people by providing them and their government with reliable information which can be used in shaping public policy and law. State universities above all others, because of their direct financial support by the people, must rise to this responsibility or deteriorate to the level of vocational and technical schools. Universities not supported by tax funds share this responsibility, for these universities are also dependent on the people for financial security. There is evidence that universities are developing to a level of service to the people which may well become the strongest fortress of democracy. Unless they fully achieve their larger social functions in the commonwealth, it is not unlikely that our universities will acquire the anemic complexion of educational institutions (so called) of authoritarian states.

Casual study of world conditions should convince any one that the roots of military conflict go much deeper than the purely technical and social problems of society. Careful studies suggest that social and economic disease is a reflection of immaturity of moral and spiritual development of some of the people. Universities share responsibility with education generally for having provided opportunities for education which overemphasize materialistic conceptions of the problems of the people. It is to the glory of medical science that it has never lost sight of the human qualities in all problems, medical and otherwise. Humanism depends on factors as yet beyond the reach of the scientific method. In the practice of a profession, the art of the profession consists in the application of the methods of science to a human situation. Great as has been the scientific progress of this century, medicine has never forsaken its faith in the quality and dignity of the human spirit.

Universities can best contribute to the people's health by providing higher educational opportunities for well qualified and gifted students who can meet the requirements and responsibilities of higher citizenship and of enlightened, unselfish leadership. This requires more than the mere acquisition of knowledge. Universities must continue to be the principal seat of inspiration by their example of inspiring thinking, investigation and teaching which give full recognition to the importance of moral and spiritual values. Pagan dictatorships have destroyed some of the world's greatest liberal universities. The universities of our democracy are still free to seek a higher future. Today's great challenge to all education is to inspire the confidence of youth in the high objectives of education and inquiry which in a democracy seek truth, justice, and moral and spiritual values. Universities, democracy and religion will stand or fall together.

The Challenge to Hospitals in the Changing Attitude Toward Them

RT. REV. MAURICE F. GRIFFIN, Cleveland: During the last biennium in which the national congress and the several state legislatures were in session, it has been stated that three thousand five hundred bills were introduced into these law making bodies affecting every interest and activity of a hospital. In four states the hospital has already lost its tax exempt status as regards general taxes, and other states have limited the amount of nontaxable property they can hold. The more the activities of government are extended, the more money spent by public agencies, the greater the pressure to reduce exemptions. Tax spenders look with greedy eye on the physical properties and in some cases on the amassed endowments of our hospitals. There are those high in the councils of state who think in terms of mass production in medicine and socialization of hospitalization. The danger in legislation is a real challenge to hospitals. But a still greater challenge is in the changing attitude of the courts. Theoretically the courts reflect the will of the people, they interpret the change in public attitude. A jury is supposed to be a cross section of the community. It gives the answer to such questions as What

do the people think of the hospital when a charge of negligence is made against it; do they think that the money of the hospital should be used to pay damage claims? Hospitals everywhere are being sued by the public, by their employees and by their patients. Most of the suits against hospitals are for torts—or wrongs done for which damages are claimed. The chief tort in which a hospital is concerned is negligence, which is "an indifference concerning one's conduct in its consequences to another, or the improper regard for the safety of another." The misconduct for which the hospital is liable is "doing something which should not be done, doing badly something that should be done, in not doing something that is imposed as a duty."

The hospital has a legal duty to make safe the place in which it cares for patients, to which it invites visitors and in which it engages its employees to work. The obligation to the patient begins when he is admitted—not before. The legal obligation is to furnish its facilities and to procure competent medical and nursing care. The courts have held that the hospital "undertakes not to heal or to attempt to heal through the agency of others but merely to supply others who will heal or attempt to heal on their own responsibility." Physicians acting in their professional capacity are considered "independent contractors."

When hospitals are brought into court, the first thing to be determined is their status as charitable institutions. Traditionally the voluntary charitable hospital incorporated not for profit, or on a religious foundation, was considered a charitable hospital by the courts. Now, in many of the states, proof is required in each case that the hospital is actually doing sufficient charity to establish such a classification. Hospital people should give serious consideration to the reasons for this change in the attitude of the courts, reflecting the attitude of the people. High rates, public appropriations for the care of the indigent, magnificent buildings, all the indications of prosperity are some of the things that have brought about the change. But there is something else. The more the hospital demanded of the patient, the more critical, the more exacting, the patient became. In olden days when the hospital was conducted as a charity, patients were deeply grateful. When it becomes a coldly scientific business with the human element submerged and the personal equation largely absent, selling health, which the people have to buy and for which they have to pay dearly, patients lose their appreciation and feel they are absolved from further obligation by the size of the bill. They tell you that hospitals charge so much that they do not understand the meaning of "not for profit" and "charitable." They consider it sharp practice to be told that they can have a room for $8 or $10 a day and when they are leaving to have a bill for extras presented to them. The increasing sentiment to the effect that modern conditions do not justify granting the hospitals any exemption is shown in many recent court decisions.

The best possible defense against damage suits is to reduce the cause of accidents. Medical examinations save the hospital by disclosing defects of vision and hearing and keep the personnel up to par. Extraordinary efforts must be made to train them in safety measures. Safety classes where it is all planned out beforehand are a great help. Where are the emergency exits and the fire alarm? Are the steam pipes so plainly marked that even a stranger could turn them off in an emergency? Does every one know how to take care of the patients, if a situation is serious enough to involve them? The hospital should have a manual of instruction for all employees, interns, nurses, professional and nonprofessional personnel, telling them all just what to do in case of accident. When an accident occurs, searching inquiry should be conducted with the hope of discovering the cause. Employees should be repeatedly warned of the danger of any remark or action that would be prejudicial to the hospital, made at the time of the accident. Complete records must be written at once, with the thought in mind that they may be on exhibition and under scrutiny in a court. Pictures should be taken if possible. A report should at once be made to the attorney, whose procedure should be to prepare the case as if it were on the docket, although it may never be. Most of the hospital's money troubles with patients could be eliminated by the establishment of a good hospital service association.

It would be fortunate if more of the prominent physicians and hospital administrators would take the leading part in this great national movement, would promote the formation of local associations and would become more active in developing them along the right lines so that the interests of patient, hospital and physician would always be conserved. The doctors and the hospital administrators must furnish adequate and satisfactory care to the American people at a cost they can pay. The program of hospital service plans will solve the problem if it is given the sincere support of all who should be interested. This will prevent the interference of government, the socialization of medicine and hospitalization.

Adjustment of Medical Education to Social Demand

CHAUNCEY D. LEAKE, PH.D., San Francisco: Social demand on medical training has remained much the same for centuries: better medical care at lower cost. Training for low cost but adequate medical care for society implies continual alertness and adjustment to increasing knowledge and its medical application, and to changing social and economic conditions. Most of us resist change, unless it is along the slower and easier way. But it is wise to remember in medical training that society really retains the control it has always exercised in medical affairs. Many of these matters are involved in what is called "medical ethics" and deserve far more systematic attention than they have received from medical educators.

A clear-cut issue seems to be arising in undergraduate medical education. Should the assembly line be set toward supplying general practitioners or should it be geared to the departmentalized tempo of specialists? There seems to be no issue about postgraduate medical education. It is definitely specialty training. Recent surveys indicate that about 85 per cent of medical practitioners in the United States are to be classed as "general practitioners." It also appears that this is a desirable proportion to maintain for the general medical needs of the people. Nevertheless, undergraduate medical education remains organized on departmentalized lines, which coincide with specialty fields.

In current undergraduate medical education, two factors operate toward specialty training: (1) emphasis on technical applications of increasing scientific knowledge, which tends to bring about a triumph of technic over reason, and (2) departmentalized instruction, which tends to develop competitive showmanship, glamor and prestige complexes, and arbitrary division of spoils, with loss of the sick person in a multiplicity of diseased parts. Dean Davison has deplored that only 25 per cent of recent graduates intend to enter general practice. Is this meeting the social demand for adequate medical care at low cost? If so, why do cultists continue to flourish and why so much self medication?

While there seems to be reluctant approval of the idea of organizing undergraduate medical training to provide general practitioners, the operation of our undergraduate training is at least psychologically directed to the training and furnishing of specialists. It is a sort of prespecialist training.

If it is agreed that basic undergraduate medical training is to be directed toward general practice, certain definite technics are indicated. One essential is to devise a procedure whereby departmental barriers may be removed. Is it possible to provide "clinical preceptors" responsible to no single department but rather to the dean's office, thus representing the field of medicine as a whole? Is it possible to provide such preceptors for individual guidance of medical students? One preceptor might handle satisfactorily the general work of three to six students, particularly if each student is given a small office and laboratory facility as followed at Tulane. The preceptor system, proposed as a formal part of recent American medical education by the late Dean C. R. Bardeen, by Dr. W. J. Kerr and in the tutorial system at Harvard, has not yet received a fair trial. The important point seems to be to set up preceptors independent of any department of medical instruction or any specialty.

In the present emergency organized medicine faces the problem of supplying large numbers of general practitioners to the Army and Navy. Relatively few specialists are needed. There is danger of serious professional frustration if highly trained specialists are assigned to routine duty, either examining draftees or taking medical responsibility for small troop units. There is unrest among reserve medical officers at the prospect of routine duty, with no consideration for special qualifications. It would seem that our immediate emergency needs can best be met both in the military service and in civilian life by organizing clinical training for effective general practice as soon as a rotating internship is completed. No matter how the present emergency develops there is certain to be a terrifying disorganization as it subsides. It does not seem likely that we can afford the luxury of highly organized cooperative specialty medical practice either in the emergency or in the postemergency period. It would seem wise to reorganize our current clinical training so that during the next few years most of our medical graduates can step directly from a rotating internship to an effective general practice at a reasonably low cost to the public. Training for general practice seems to imply a rotating internship. Necessarily organized on specialties, this would provide the general practitioner with an insight to specialty technics and the importance of leaving these technics to a qualified consultant, when specially indicated. Rotating internships designed to meet social demand for general practitioners might be improved by maintaining preceptor supervision and by providing adjunctive technical services only when urgently needed.

The public is aware of the tendency for increasing fees among specialists and for duplication of service with rising cost. Prepayment plans for clinic service in large cities are in an experimental stage. Is it possible for a general practitioner to function on a prepayment plan? I am unaware of any pertinent criticism to a retainer fee plan proposed several years ago. This idea was predicated on the notion of the general practitioner as a specialist in disease prevention. It suggested a retainer fee for "health guidance" or "health protection." Medicine's ideal is disease prevention. The average doctor realizes that effective preventive medicine reduces his practice. However, effective practice of preventive medicine by individual doctors is possible. It may become the significant specialty of the general practitioner. The physician may for a fee agree to examine the patient as often as he thinks expedient, furnish such therapy and advice as seems indicated and make such house calls as he feels warranted. Such an agreement need not include emergency services, hospitalization and operative or special procedures. In such an arrangement the physician would be a health adviser on a retainer fee. This would seem to be a much needed specialty service for which the general practitioner is admirably fitted. Such a health advising system on a retainer basis should provide an incentive to the effective handling of preventive medicine on an individual basis. No significant criticism has been raised to this proposal except the vague expression that the physician involved may be imposed on. However, if it should occur, either party could terminate the arrangement.

More careful surveys are necessary to appraise the medical facilities available. Are large numbers of general practitioners needed in modern society, with willingness to accept moderate fees and to serve rural and suburban districts? Should specialism be restricted to a highly selected few? Can the desired result be obtained by agreement that residencies for graduate training in specialties be filled from applicants who have been in general practice at least three years? To be effective, this system of selecting residents for special training must be followed by all hospitals in a relatively large geographic area. Many might seriously object that such a plan would reduce the number of physicians applying for such residencies and might interfere with the smooth running of the hospital. The proposal represents an experimental restriction designed for the purpose of reducing the number of specialists more appropriately to social needs and at the same time of improving their quality. Some institution with sufficiently high prestige might attempt the plan experimentally. The results could be appraised within a few years and judgment reached as to the wisdom of extending the idea or abandoning it.

FEBRUARY 17—AFTERNOON

The Physician in Selective Service

COL. LEONARD S. ROWNTREE, Washington, D. C.: Perhaps no other organization in the country can serve our needs better than this Council, and yours is the only body that can render us the help that we need critically. The question is, What is our job in Selective Service? It is procurement of man power. Selective Service is the result of group work in the Army and Navy extending over years, and certain persons are still in that organization who have been in it for years. With the passing of the act, other persons have been added for certain purposes, but the backbone of this organization is that committee which was created for the procurement of man power and that today is its crucial function. We are called on to classify some 16,500,000 young men. From that group we are to examine physically and mentally and look into the moral side of 6,600,000, and from this group, if we are fortunate and the induction boards are not too severe, we shall turn over to the Army in the course of five years 4,400,000 men to become soldiers, and our contribution this year is to be 800,000. Now in the study of these men there are many records which carry information that is of value not only to medicine but to an infinite number of social organizations throughout the country. What is our modus operandi? The work is done throughout the country by local boards, which are supported in their efforts by advisory boards. An advisory board is made up of ten physicians. In the event of dissatisfaction, appeal is made to an appeal board, and here again medicine is represented as one of a group of five. So that the system is decentralized. The local board really does the work. It makes the decisions and sends the men to the Army for induction. There are 6,400 of these boards throughout the country and 18,000 examining physicians. All of these are working on a voluntary basis. Every doctor is doing the best he can as a patriotic service

How can this Council assist local boards and the examining physicians? In housing: These boards find themselves in police station cellars and bank cellars, carrying on a medical function. This organization could help us to house properly the medical function of all these boards in medical institutions, in hospitals and in medical schools. In providing assisting personnel: This is a patriotic service. It is a time of emergency. You have medical students who could assist in the work of the country as clerks, as collectors of specimens and in other ways. You could supply laboratory facilities, so that the examining physician, after he has examined three or four men, after the work in his office in the evening, does not find it necessary to go to the police station to deliver the tubes of blood to a sergeant of police who does not want to accept them. But the greatest service that you can do is to help in our crucial job. We are interested in many things that can be handled on an intelligent basis only locally. We cannot operate intelligently unless you participate in the work, furnish the information and give us the material on which to act. Intelligent selection means consideration both of civil needs and of Army needs. In the District of Columbia there is not a single local board that is not located in a hospital or medical school. In New York they have worked out a system of collaboration that is tremendously decreasing the burden. It is possible for you to do away with 50 per cent of the burden of Selective Service in its medical function and all the drudgery which falls on these volunteer workers. How can you help state departments? You represent licensure as well as medical schools, and where there are no medical schools you can act with the liaison office through your headquarters, through the state headquarters of Selective Service. How can you aid national headquarters? You have a committee which is already dealing with problems of preparedness and if you would have one of that committee act as a liaison officer, or if your committee would come to Washington and help us to face some of our problems in our own locality, we would welcome it.

What are some of our most pressing needs? We have to get an improvement in the examination of these men. We threw out 20 per cent totally disqualified and had 12 per cent for limited service and then the induction boards threw out an additional 12 per cent. So that it looks as though our acceptations on a total basis will be in the neighborhood of 68 per cent at the present time. They were 70 per cent in the last war. The

question of psychiatry has been a terrible one. The psychiatrists of the country have given us an advisory board. They have opened up seminars all over the country. They have gotten out circulars. No group has done more to help Selective Service than have the psychiatrists. Then we have the statistical problem: sixteen million five hundred thousand individuals, with people clamoring from all kinds of organizations for data. We have a committee under Dr. Lowell Reed composed of all the outstanding statisticians of all the great bureaus in Washington, and we have as our personal adviser and consultant Dr. Halbert Dunn, who is the head of Vital Statistics.

We come to the question of deferment. Our director, Mr. Dykstra, has exhausted the possibility to keep within the law and give as much deferment as is possible. Blanket deferment is illegal, and we shall not get blanket deferment through Mr. Dykstra unless he changes his mind. I believe that he has ways of solving perhaps 50 or 70 per cent of your needs in deferment. You can bring about deferment for yourselves to a large extent by changing the impersonal point of view, often the antagonistic point of view, of the local board to one of personal interest based on needs. You can reveal the needs to these boards. Make certain yourselves which men you feel must be deferred. You must have in your organization one man who will represent Selective Service, and he must know every way to bring about just deferment. If you collaborate with us we will go as far as we can in molding public opinion, but our influence is slight compared with that of the American Medical Association and with the schools and hospitals of the country. We need public opinion with us in order to bring about deferment. I have attended innumerable meetings in Washington devoted to the subject of deferment. If we could get an enlisted reserve of the Army it would solve many of our difficulties.

Is it not possible in your preparedness lectures to include something on Selective Service, and perhaps to bring into the group some dental instructors from dental schools to help in the teaching of the medical men in the field in which they are obviously weak?

If we are going to examine six million five hundred thousand men and only two thirds of them are going to be considered strictly normal, isn't there in that group perhaps the best opportunity that medicine has ever had to teach the normal and the slight departures from normal, because there will be probably at least a 12 or 15 per cent difference in the opinion of the experts of the advisory boards and local boards on one side and induction boards and the Army on the other? Every group in the country has had to make adjustments. In medicine we must keep the standard high, and I am going to ask you to consider every way to keep this stream flowing of the same quality that we had; but I think that you may have to consider numbers and you may have to consider temperament. Dr. Rawlings has told me how in Canada they have a special type of consideration of students whereby they get training in the particular field that will be of advantage if they are taken into the army. Isn't it possible that we might use vacations or in some way direct a certain proportionate time of these men so that it will meet military needs? We must take a long view of this, because there is a strong probability that we are in for a long time and we must prepare on that basis. We ought to organize to aid one another.

DISCUSSION

CHAIRMAN WILBUR: To try to administer as stupid a piece of legislation as Selective Service is some task. This legislation is a compromise between different points of view, passed by a legislative body. What hearing did the medical group have on this bill? What did the universities get? Nothing. It was put through without any consideration of the modern ways in which wars are fought. You cannot expect, without physicists and chemists and mathematicians and doctors and bacteriologists and so on, to take on a long war. We are up against it. We must educate the people or we shall show that our democracy is unable to meet the real situation. It seems clear that if we are going to destroy our medical institutions we are not going to have prevention and we are not going to have the things we have had for the protection of the American people and for the protection of the military service.

DR. MORRIS FISHBEIN, Chicago: The subjects discussed by Dr. Rowntree had careful consideration on Saturday in a joint conference held by the Council on Medical Education and Hospitals and the Committee on Medical Preparedness of the American Medical Association with the Subcommittee on Medical Education of the Health and Welfare Committee of Mr. McNutt, who is the coordinator for health and welfare. This body, having the advice of representatives of the Army and the Navy Medical Corps and of the United States Public Health Service and of other agencies, sent to Mr. Dykstra a telegram in which they disagreed flatly with the concept that it is not going to be possible to defer medical students in connection with Selective Service. There are many reasons why medical students must be deferred. It is more pressing than almost any other need with which such agencies as the Office of Procurement and Management and similar groups are concerned. The United States Army Medical Corps is undergoing an expansion and has indicated to the Committee on Medical Preparedness of the Association that it will require during the next five years eight thousand physicians each year from private life to aid the training program under the Selective Service Law. There are in the medical schools of the United States graduating each year about five thousand two hundred men, and they go at once into internships and many of them thereafter into residencies. If we were to take from the available men who graduate and who have a one year internship those who can be taken at once into the Selective Service and the Army medical training program, we could count on about three thousand five hundred men who would be susceptible to the draft as selectees in order to provide medical men for the Army, and thus you see we are only beginning. If we use every man who is possibly available, we are only beginning in that way to answer the needs of the United States Army and Navy Medical Corps for physicians who will be required in their work. Mr. Dykstra made the suggestion that the medical schools of the United States at once begin to increase their enrolment in the freshman class by 10 per cent. If we were to begin with the next semester to enroll 10 per cent additional men in medical schools, the first men to become available would become available in 1946, which would be after the present five year training program is completed; but were this not the case, not the slightest suggestion was made as to how those schools, which are now crowded to capacity without sufficient equipment and without other things necessary to continue at the topmost point the medical training that they now give, could enroll an additional 10 per cent of men. Neither is there evidence that they could get 10 per cent additional of men as well qualified as those they now get, and the percentage of failures at present among some six thousand men admitted to medical schools each year in the United States is sufficient to show that not even the high quality of men now admitted to medicine are all able to complete successfully the modern medical curriculum. I agree with Dr. Rowntree that any attempt to lower the quality of medical training now available in this country would defeat the purpose that every one is seeking. There can be no possible lowering of medical standards to meet the kind of emergency that exists. The picture as we see it is this: Dr. Rowntree has told us that if Mr. Dykstra will change his mind and if his board will change their minds something can be done. If these men cannot change their minds perhaps we need more flexibility and understanding on their part of what the need is in relationship to proper deferment of every single well qualified medical student in good standing in an approved medical college. It is more important to do it by a proper message from Mr. Dykstra, or other people even higher than Mr. Dykstra in this situation, than to attempt to secure new legislation, because new legislation, such as the ridiculous proposals which have come from Senator Murray, would aid in bringing into the ranks of medicine men from many schools not properly approved, men from many organizations and institutions who could not possibly qualify to meet the standards which the United States Army Medical Corps has already set for the obtaining of a commission in the Medical Corps. The medical profession is going along with the Selective Service. We have provided more than six thousand physicians for Selective Service boards. We have provided more than one thousand two hundred physicians for induction boards. We have pro-

In the present emergency organized medicine faces the problem of supplying large numbers of general practitioners to the Army and Navy. Relatively few specialists are needed. There is danger of serious professional frustration if highly trained specialists are assigned to routine duty, either examining draftees or taking medical responsibility for small troop units. There is unrest among reserve medical officers at the prospect of routine duty, with no consideration for special qualifications. It would seem that our immediate emergency needs can best be met both in the military service and in civilian life by organizing clinical training for effective general practice as soon as a rotating internship is completed. No matter how the present emergency develops there is certain to be a terrifying disorganization as it subsides. It does not seem likely that we can afford the luxury of highly organized cooperative specialty medical practice either in the emergency or in the postemergency period. It would seem wise to reorganize our current clinical training so that during the next few years most of our medical graduates can step directly from a rotating internship to an effective general practice at a reasonably low cost to the public. Training for general practice seems to imply a rotating internship. Necessarily organized on specialties, this would provide the general practitioner with an insight to specialty technics and the importance of leaving these technics to a qualified consultant, when specially indicated. Rotating internships designed to meet social demand for general practitioners might be improved by maintaining preceptor supervision and by providing adjunctive technical services only when urgently needed.

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What are some of our most pressing needs? We have to get an improvement in the examination of these men. We threw out 20 per cent totally disqualified and had 12 per cent for limited service and then the induction boards threw out an additional 12 per cent. So that it looks as though our acceptations on a total basis will be in the neighborhood of 68 per cent at the present time. They were 70 per cent in the last war. The

question of psychiatry has been a terrible one. The psychiatrists of the country have given us an advisory board. They have opened up seminars all over the country. They have gotten out circulars. No group has done more to help Selective Service than have the psychiatrists. Then we have the statistical problem: sixteen million five hundred thousand individuals, with people clamoring from all kinds of organizations for data. We have a committee under Dr. Lowell Reed composed of all the outstanding statisticians of all the great bureaus in Washington, and we have as our personal adviser and consultant Dr. Halbert Dunn, who is the head of Vital Statistics.

We come to the question of deferment. Our director, Mr. Dykstra, has exhausted the possibility to keep within the law and give as much deferment as is possible. Blanket deferment is illegal, and we shall not get blanket deferment through Mr. Dykstra unless he changes his mind. I believe that he has ways of solving perhaps 50 or 70 per cent of your needs in deferment. You can bring about deferment for yourselves to a large extent by changing the impersonal point of view, often the antagonistic point of view, of the local board to one of personal interest based on needs. You can reveal the needs to these boards. Make certain yourselves which men you feel must be deferred. You must have in your organization one man who will represent Selective Service, and he must know every way to bring about just deferment. If you collaborate with us we will go as far as we can in molding public opinion, but our influence is slight compared with that of the American Medical Association and with the schools and hospitals of the country. We need public opinion with us in order to bring about deferment. I have attended innumerable meetings in Washington devoted to the subject of deferment. If we could get an enlisted reserve of the Army it would solve many of our difficulties.

Is it not possible in your preparedness lectures to include something on Selective Service, and perhaps to bring into the group some dental instructors from dental schools to help in the teaching of the medical men in the field in which they are obviously weak?

If we are going to examine six million five hundred thousand men and only two thirds of them are going to be considered strictly normal, isn't there in that group perhaps the best opportunity that medicine has ever had to teach the normal and the slight departures from normal, because there will be probably at least a 12 or 15 per cent difference in the opinion of the experts of the advisory boards and local boards on one side and induction boards and the Army on the other? Every group in the country has had to make adjustments. In medicine we must keep the standard high, and I am going to ask you to consider every way to keep this stream flowing of the same quality that we had; but I think that you may have to consider numbers and you may have to consider temperament. Dr. Rawlings has told me how in Canada they have a special type of consideration of students whereby they get training in the particular field that will be of advantage if they are taken into the army. Isn't it possible that we might use vacations or in some way direct a certain proportionate time of these men so that it will meet military needs? We must take a long view of this, because there is a strong probability that we are in for a long time and we must prepare on that basis. We ought to organize to aid one another.

DISCUSSION

CHAIRMAN WILBUR: To try to administer as stupid a piece of legislation as Selective Service is some task. This legislation is a compromise between different points of view, passed by a legislative body. What hearing did the medical group have on this bill? What did the universities get? Nothing. It was put through without any consideration of the modern ways in which wars are fought. You cannot expect, without physicists and chemists and mathematicians and doctors and bacteriologists and so on, to take on a long war. We are up against it. We must educate the people or we shall show that our democracy is unable to meet the real situation. It seems clear that if we are going to destroy our medical institutions we are not going to have prevention and we are not going to have the things we have had for the protection of the American people and for the protection of the military service.

DR. MORRIS FISHBEIN, Chicago: The subjects discussed by Dr. Rowntree had careful consideration on Saturday in a joint conference held by the Council on Medical Education and Hospitals and the Committee on Medical Preparedness of the American Medical Association with the Subcommittee on Medical Education of the Health and Welfare Committee of Mr. McNutt, who is the coordinator for health and welfare. This body, having the advice of representatives of the Army and the Navy Medical Corps and of the United States Public Health Service and of other agencies, sent to Mr. Dykstra a telegram in which they disagreed flatly with the concept that it is not going to be possible to defer medical students in connection with Selective Service. There are many reasons why medical students must be deferred. It is more pressing than almost any other need with which such agencies as the Office of Procurement and Management and similar groups are concerned. The United States Army Medical Corps is undergoing an expansion and has indicated to the Committee on Medical Preparedness of the Association that it will require during the next five years eight thousand physicians each year from private life to aid the training program under the Selective Service Law. There are in the medical schools of the United States graduating each year about five thousand two hundred men, and they go at once into internships and many of them thereafter into residencies. If we were to take from the available men who graduate and who have a one year internship those who can be taken at once into the Selective Service and the Army medical training program, we could count on about three thousand five hundred men who would be susceptible to the draft as selectees in order to provide medical men for the Army, and thus you see we are only beginning. If we use every man who is possibly available, we are only beginning in that way to answer the needs of the United States Army and Navy Medical Corps for physicians who will be required in their work. Mr. Dykstra made the suggestion that the medical schools of the United States at once begin to increase their enrolment in the freshman class by 10 per cent. If we were to begin with the next semester to enroll 10 per cent additional men in medical schools, the first men to become available would become available in 1946, which would be after the present five year training program is completed; but were this not the case, not the slightest suggestion was made as to how those schools, which are now crowded to capacity without sufficient equipment and without other things necessary to continue at the topmost point the medical training that they now give, could enroll an additional 10 per cent of men. Neither is there evidence that they could get 10 per cent additional of men as well qualified as those they now get, and the percentage of failures at present among some six thousand men admitted to medical schools each year in the United States is sufficient to show that not even the high quality of men now admitted to medicine are all able to complete successfully the modern medical curriculum. I agree with Dr. Rowntree that any attempt to lower the quality of medical training now available in this country would defeat the purpose that every one is seeking. There can be no possible lowering of medical standards to meet the kind of emergency that exists. The picture as we see it is this: Dr. Rowntree has told us that if Mr. Dykstra will change his mind and if his board will change their minds something can be done. If these men cannot change their minds perhaps we need more flexibility and understanding on their part of what the need is in relationship to proper deferment of every single well qualified medical student in good standing in an approved medical college. It is more important to do it by a proper message from Mr. Dykstra, or other people even higher than Mr. Dykstra in this situation, than to attempt to secure new legislation, because new legislation, such as the ridiculous proposals which have come from Senator Murray, would aid in bringing into the ranks of medicine men from many schools not properly approved, men from many organizations and institutions who could not possibly qualify to meet the standards which the United States Army Medical Corps has already set for the obtaining of a commission in the Medical Corps. The medical profession is going along with the Selective Service. We have provided more than six thousand physicians for Selective Service boards. We have provided more than one thousand two hundred physicians for induction boards. We have pro-

vided approximately one thousand physicians for appeal boards and for other agencies associated with the Selective Service, and in the case of any emergency the medical profession will provide forty or fifty thousand physicians to meet the medical needs of the Army and Navy and the Public Health Service and the civilian needs of the country; but we must have the kind of sympathetic understanding which will enable us to function efficiently at the high level that we have had in the past, and we must not permit any type of political manipulation or maneuver to use an emergency in an attempt to lower the standards of medical service or the quality of medical education.

DR. NATHAN B. VAN ETTEN, New York: We have heard that war is a degeneration of the moral forces of all the people. Because of the high moral standards of medical education for public service, the medical profession occupies a position of leadership. It must not be let down by sacrificing any of the preliminary education of students. This is a five year program. Young men fear to disrupt the process of supporting themselves and their families. I think we must look to older men, up to the standard retiring age of our hospital attending and visiting physicians and surgeons, to fill a great deal of the force of direction and service to the government in this selective operation. Plenty of men above 50 years of age are competent and willing to give service to the government. Details of rank and waiving of pensions can be arranged. We should not sacrifice any of the preliminary developments in medical education or any of the freshmen, sophomore, junior and senior grades or the one year internship. We must look to some of the older men who have already been deferred by age to take the places that are so important in the management of all our basic defense.

DR. WILLARD C. RAPPLEYE, New York: We have been working in our area within this act in an endeavor to carry out the very point that Dr. Rowntree is making, namely of endeavoring to do it locally, and we have worked out a plan in New York City, through the director of the Selective Service for the city and through the organizations concerned in the hospital field, the medical schools, and other agencies. We have worked largely with the appeal boards, with the result that when material and questions have been brought to them from the local boards they have had a reasonably uniform policy in this local area. There are reasons in some of the sections of the country why this might not work, but it is working with us. In our New York area we are getting along satisfactorily with the present arrangement and are not eager to see changes in legislation or other devices introduced that will upset what we are actually carrying out. When you realize that one fifth of all the residencies in the United States are in the New York City area and one sixth of all the internships and we have our own proportion of the medical students, you realize that we are dealing with a major feature of this problem of the country as a whole. We have gone further too in some of these matters that Dr. Rowntree mentioned in collaboration with local units, for example in providing hospital facilities through the city department of hospitals for induction boards in the neighborhood, and we have been doing things of that kind even outside the draft mechanism for dealing with medical needs, and now we are serving all the induction boards of New York City without the slightest difficulty and they are sending their patients in as they are picked up by the induction boards under certain regulations. We are also handling all the questions in our municipal hospitals of transfer of individuals, ambulance service and otherwise, in the actual handling of this large body of soldiers that may be in actual process of transport. We are eager to help and have found the greatest response on the part of local boards and appeal boards and the director of the New York Selective Service. We can understand that uniformity does not exist in the country, and one of the greatest benefits that could come would be pronouncement of a satisfactory policy that the federal authorities would regard as reasonable for uniformity in dealing with these problems. We should have our local boards handle the problems, as they now are under the law. In other words, we have to carry out a great deal of local educational program through medical schools, county medical societies and hospitals, and we have had complete collaboration with those three major agencies in New York. All of us are firmly convinced that nothing should be done to interrupt the stream of satisfactorily trained physicians. We have done one other thing: We have separated out for deferment the medical students and interns, and I include those who have been accepted for the incoming first year class, although that is still perhaps not as satisfactorily worked out because we haven't actually reached that difficulty yet; but at any rate we are handling the interns and medical students on an educational basis and appealing for deferment of those students on that ground, and in doing so in every instance the medical school is certifying to the local board that a student is in good standing and we give them full information regarding the student. For the most part we are requesting that he be put in 2-A under the classification of "necessary man." When it comes to the teaching staff we have other special problems. There again we have certified those whom we regard as essential. We have set up a committee, in the faculty of medicine in our own institution, as an illustration, and every individual in the institution is classified by the head of the department and a committee on administration of the faculty, and no one individual department certifies as to the essential services of an individual. It must come from the central committee of which the dean is chairman, and we have found frequently the necessity of not granting the request of the department that the individual be considered essential. We decided that we were on sounder ground if we requested the deferment of the resident on the basis that he is an essential person in the local community health program. We have secured deferment of residents in all our hospitals until the completion of their internship or their residency in this instance, provided it is a reasonable period. We would ask for no deferment beyond two years in the residencies. Most of the local boards go along with us on the deferment straight through the residency as long as we keep reasonable. It is important that we be not presented to the public as a group attempting to secure special consideration and deferment for our own benefit. Our purpose of deferment and our requests for deferment are entirely in line with keeping a stream of adequately trained person for the medical services. What we are anxious to do is to have every student at the proper time serve his country.

DR. HAROLD S. DIEHL, Minneapolis: It is heartening to hear the optimistic note in Dr. Rowntree's discussion of the possibility of deferment of medical students until they have completed their undergraduate medical education. England and Canada have both insisted that this be done. Every authority in a responsible position in this country for public health work and for the provision of medical service insists that it is in the interest of national defense and the public welfare that it be done. In view of all this it has seemed incomprehensible that provisions to accomplish this were not taken care of long ago. All that we are asking is that military service for this group be deferred in order that they may complete the training that is essential for the public welfare. If this is done, these young men will go into military service at the time of their maximum effectiveness to the armed forces. Dr. Rowntree made suggestions concerning methods by which deferment may be facilitated. All of us who are deans of medical schools can assure him that the medical schools will cooperate with local draft boards, advisory boards and appeal boards in carrying out the provisions of the Selective Service Law. This will make for a better understanding among the groups. However, if we are going to have uniformity of action throughout the country we must have a statement from the national headquarters of the Selective Service, which will go to state offices, to appeal boards and through them to local draft boards, that it is considered to be in the interest of national defense and the public welfare that military service for medical students be deferred until they complete their undergraduate medical education. If this is done, the education of physicians can be continued without serious interruption. This provision for deferment must include all classes in the medical schools and students who have been accepted for admission to the medical schools. If deferment is provided only for third and fourth year students, next year will have few third year students and the year after that will have few third and fourth year students in medical schools. We must have a continuing supply of qualified students entering medical schools and continuing

through each year of the medical course. It would be tragic for our country to disrupt the training of these carefully selected and already partially trained young men.

DR. E. J. CAREY, Milwaukee: I should like to assure Dr. Rowntree of the hearty cooperation of the medical schools. We have already done it in Milwaukee. As medical examiner of one of the boards, we have coordinated the work of the medical examiners in Milwaukee, in the west part of the city, and all these examinations are conducted at Marquette University School of Medicine. What we have done is to mobilize the various departments. All the departments of the medical school as well as the students have been conducting these examinations over the last three months. If the medical schools were as derelict in their duty as apparently some of our superiors have been and that foresight were lacking, these examinations would not have been completed, for we have had to use our own supplies all the way through, although there has been a promise on the part of the government. I am saying this advisedly and not as a critic from the outside, because I am a National Guard officer myself, and when it comes to appealing for a little more reason and a little more sense in regard to what we need in this country in preparedness, it is time a little more intelligence was manifested in regard to assuring these boys what the future is going to be in regard to the study of medicine. I think that this year in all the classes we have seen more jitteriness on the part of the students and that is not to the best interest of their intellectual progress in school. They are contributing night work in regard to these medical examinations. There should be more cooperation on the part of others rather than the indictment of the medical profession which is going on in Washington, D. C., at present and in other centers.

Educational Purposes of the Standard Nomenclature of Disease

DR. EDWIN P. JORDAN, Chicago: The names of diseases have been chosen so haphazardly that the same term has not always meant the same disease and different terms have often been applied to disease processes which were essentially identical. Today much more is known of the nature of many diseases and a better attempt can be made at scientific classification than anything which was possible previous to the twentieth century. However, the situation with regard to classification of disease is still disorderly.

Any classification of disease should be rigidly inspected as to the purposes and how well it satisfies those purposes. What then are the desiderata of a classification of disease? 1. All diseases which are alike should appear under the same heading. 2. The classification should differentiate clearly between a disease entity per se and those manifestations of a disease which are properly called symptoms but which are common to different disease processes. 3. The title applied to a disease should indicate at least to some extent what the nature of the disease really is. 4. The classification should be established so that new diseases can be added or change in the fundamental information concerning a disease can be recorded by modifying the title or other descriptive features. Furthermore a classification of disease should serve to differentiate clearly between a disease entity and symptoms which may be caused by different disease processes. For example, hypertension, although one of the most common of all diagnoses, is not a disease entity but a symptom which may develop from several kinds of disease processes. It does no disservice to medical education to attempt to force physicians, residents, interns and medical students to clarify their thinking on such differentiations by requiring that symptoms be placed with symptoms and diseases with diseases rather than generally mixed up. If hypertension is not a permissible diagnosis, some effort will have to be made to determine what is the cause of that symptom.

Titles which give no information as to the location or cause of disease are common, and it will be many years if ever before they can be entirely eliminated from medical publications. Among the most striking of the meaningless titles in this sense is the eponym—that disease which has no other name than that of some man who discovered the disease. A striking example of this is the term Pick's disease, as there are four diseases to which this eponym is attached, each called after a different man of the same name and applying to different conditions.

A satisfactory classification of disease must provide for change in knowledge or for the discovery of some new disease. Any attempt to standardize the expression of present knowledge must recognize that medicine is dynamic and that what today is considered standard may tomorrow be viewed as an old fashioned idea. Nevertheless the very attempt to label disease has resulted in much progress in medicine and there should be no danger of stifling medical thought by adopting a rational method of disease classification.

The Standard Nomenclature of Disease was initiated in 1928 by the New York Academy of Medicine and became fathered by the National Conference on Nomenclature of Disease. The basic plan was officially adopted in 1930. Under the editorship of Dr. H. B. Logie, the first edition appeared in 1933 and a second edition in 1935. The method adopted was to classify each disease according to its anatomic location and etiology. Numerals were adopted to promote flexibility and accuracy and to facilitate filing purposes. Three digits are used to describe the anatomic site. There are twelve main anatomic divisions, beginning with 000, Body as a Whole, and proceeding with the various systems such as 300, Respiratory System, 700, Urogenital System, and the like. Each diagnosis involving the same region of the body always receives the same anatomic numerical designation. Similarly, any one etiologic factor, regardless of what part of the body is involved, always receives the same etiologic designation. The Standard Nomenclature thus attempts to answer the problems of placing like diseases in the same pigeonhole and the comparability of disease diagnoses in various institutions.

The Standard Nomenclature does not allow the entry as a disease of such terms as dysuria, leukorrhea, anuria or hypertension, all of which are symptoms. Since it is recognized, however, that symptoms may be of interest for certain types of medical investigation as a matter of record, the Nomenclature contains lists of supplementary terms, which can, if an institution or an individual physician desires, be entered on separate manifestation cards and recorded with the understanding that they are not themselves diseases. The Standard Nomenclature represents a step toward the use of descriptive titles and it employs English terms in good usage when possible. The copyright and editing were transferred to the American Medical Association in 1937. Its periodic revision for an indefinite period is contemplated.

No disease nomenclature can be above criticism, and the Standard Nomenclature of Disease has proved to be no exception. One must take cognizance of the objections, and with this purpose in mind the present revision of the Standard Nomenclature, which is almost completed, will present a somewhat changed form and arrangement. The changes, however, will not result in any serious disturbance for institutions already employing the Nomenclature. The demand for a surgical nomenclature to accompany the disease nomenclature has been so overwhelming that it was decided by the National Conference on Medical Nomenclature to authorize such a compilation. This is in process of preparation.

Objectives of Medical Education

DR. SAMUEL C. HARVEY, New Haven, Conn.: The more important qualities required of the physician, whether in practice or otherwise, are those of integrity, intelligence, capacity for work, judgment and a faculty for ascertaining the truth. None of these can be favorably determined by the traditional didactic and obligatory approach to education but rather by example and by the actual experience of the student. The one objective that can be best learned in the medical school is that of the method for determining the truth, that is the scientific method. This is fundamental to every variety of professional activity in which the future physician may engage. The educational experience should be so directed as to ensure the continuation of learning throughout one's professional life and not cessation with the obtaining of a degree. By direct

experience, correlated with the accumulated experience of others, not only can the scientific method be learned but also an adequate basic content of knowledge. It is the obligation of the faculty to provide the student with opportunity for learning, but it is primarily the responsibility of the student to take advantage of such.

A School of Dental Medicine

Dr. C. Sidney Burwell, Boston: In June 1940 Harvard University announced the proposed transformation of the Harvard Dental School into the Harvard School of Dental Medicine. Under this plan, men seeking to enter dentistry will register in both the School of Dental Medicine and in the Harvard Medical School. At the end of five years they will receive both the M.D. and the D.M.D. degrees. They will thus be both medical students and dental students.

There are two points about this plan which should be considered here. First, what is the reason, if any, for suggesting that men planning to enter dentistry should have medical training in addition to dental training? Second, if it can be shown that both types of training are desirable for these men, is the proposed plan a good way to attain this objective? Clinically or physiologically speaking it is impossible to separate any part of the body from the other parts and unwise to neglect or minimize the importance of general factors in their effect on those reactions to injury which constitute disease. There is a wholesome crumbling of barriers between departments in schools and hospitals and a useful extension of cooperative undertakings in the care of patients, the instruction of students and the prosecution of research. The growing appreciation that, while specialization is useful, isolation is dangerous is shown in the changing attitude toward special hospitals. It is now widely accepted that such hospitals are usually better as special departments of general hospitals than as segregated institutions.

The course at Harvard which is proposed as a basic preparation for dentistry is to include, essentially, the basic course now given in the Medical School as a preparation for medicine. In planning the course it has been carefully kept in mind that this biologic training, this basic medical experience, is to underlie and supplement and not to overlie and supplant the technical preparation necessary for immediate remedial intervention in dental disorders. What is desired to train is an individual competent to deal, from the point of view of reparative and restorative procedures, with the dental problems of his patients and to provide this individual with such a basic experience that he can take advantage of certain opportunities now existing in the field of dental medicine. These opportunities include, in addition to the general practice of reparative and restorative dentistry, teaching, research, special types of practice and public health. There is an opportunity for the study of dental disease by men who have a first class training in dentistry and a better biologic and medical background than is given by any existing dental school. Accordingly, men will be admitted to a combined course which will include the essentials of the four year medical school curriculum, plus a basic training in dentistry as such. These men will not be segregated but will be integral members of the medical school classes. The plan makes possible the recognition of certain courses in dental subjects as appropriate training for the M.D. degree and of certain courses in medical subjects as appropriate for the D.M.D. degree. There is already some opportunity for election in the course leading to the M.D. at Harvard. We hope there will be more. At any rate, a certain amount of leeway is permitted the medical student in his choice of subjects. The Faculty of Medicine is rightly prepared to accept courses dealing with oral and dental disease in this elective. This seems to me a cordial cooperation in the joint effort toward a closer relationship between medicine and dentistry. It is not a lowering of the standards of medical education, nor can I see how any one, least of all dentists with their first hand knowledge of the relations of oral disease and general health, can question the validity of an appropriate amount of work dealing with oral disease as part of the qualification for a medical degree. The presence in the class of a considerable number of men who have a deep interest in dentistry, the responsibility on the teachers in the medical school of remembering that the teeth and jaws are actually part of the human body, are calculated to improve rather than to depreciate the medical education of all the students in the Harvard Medical School.

The dental training of these candidates for the two degrees will not be concentrated at the end of their course but will be scattered throughout the five years, increasing in amount from 5 per cent the first to 87 per cent the final year. Special opportunities will be developed in hospitals and clinics for new forms of clinical teaching in dentistry and medicine as related fields. A group of small, active departments in the School of Dental Medicine will include the Department of Orthodontics, the Department of Oral Surgery and the Department of Clinical Dentistry. These departments will work in close cooperation and collaboration with the pediatricians, the obstetricians, the anatomists, the biochemists, the surgeons, indeed with all the divisions of the medical school, since all are concerned in this important problem. The purpose of the plan is to train dentists, and they will have opportunity to acquire not only the requisite knowledge but also the requisite skill.

The present plan for the Harvard School of Dental Medicine is not a new idea. The tendency or trend of development of dental education for twenty-five years has been toward a new and effective relation with other divisions of the sciences concerned with health matters, and perhaps the plan may be described as a recognition of changes which have already taken place in dentistry. The plan has been set up. As an educational experiment, it may be important not only to the future of dentistry but also to the future of medicine. It will not only supply the country with a group of men with a training applicable to the practice and study of dentistry but we hope it will also result in experience which may be useful in planning the training of men concerned with other special fields of medicine.

The Problem of the Premedical Student in a Physics Department

Harvey B. Lemon, Ph.D., Chicago: We have before us today the specific problem of the rigorous analytic second year sequence in physics as it is now being given. To this course no one is admitted who is not adequately prepared in high school in mathematics and elementary physics or has been successful in our introductory general course. This sequence is rigorous and preprofessional from the very start. It is fully at that level of rigor with the corresponding physics courses in our best engineering schools. Of the one hundred and twenty-five odd students who sit before us each year in this course, 50 to 60 per cent are premedical students of whom its successful completion is required for entrance to medical school. This course was but the first of many hurdles which the student must take before he could qualify himself to enter the practice of medicine. Those that we eliminated were alleged to be of the type that would ultimately be eliminated anyway long before work to an M.D. degree was completed. Although we find no significant difference between the average grades of the premedical students and the others, it has been true for some time that the 5 to 6 per cent of failures in this course are of the premedical group, with an exception now and then. The low grades of these failures are offset in the average by the almost equal number of exceedingly able students having the same professional destination. Moreover, even the failures are not students whose capacity for intellectual effort is especially low. They are those who underestimate the amount of time necessary to get the minimum passing grade in the physics course.

About two years ago the Department of Physics was authorized to segregate the premedical students if this seemed desirable. The medical dean's office was informed that it might be some years before we availed ourselves of this grave responsibility. An attempt has been made already to enlist the interests of a group of medical colleagues in the problem, and progress seemed to be under way until these gentlemen became aware of the great improvements which have been made in physics instruction per se in the last decade. Thereupon our colleagues' opinion was almost unanimous that now, more than

ever before, if the premedical student had any significant difficulty with his college physics he was undoubtedly a hopelessly undesirable candidate for medical entrance. The effort was completely abortive and here we seem still to be stuck. This therefore is why we are seeking for light on the, perhaps, unwarranted assumption that the problem really has not yet been faced and settled.

The best, most modern attempt at building a year's course in physics, motivated by the needs of the premedical students, has been made by Prof. E. L. Harrington of the University of Saskatchewan, who has spent many years and wide travel conferring with medical men on this problem in this country and abroad. His work deserves great credit. Nevertheless, a careful study of his book revealed too many lacunae with respect to fundamental items necessary to a thorough understanding of the principles and methods. I cannot see in it a solution to this problem. Indeed I wonder if it might be possible to make physics much better integrated with biology if we should not make such a course available to all our students—not just the premedics. It would certainly be inconsistent with our previous experience and the trend of curriculums today if we did otherwise.

We finally came to the opinion that today no single individual could possibly encompass this task. A lone physicist working on this problem, and finding for himself great interest in the newly opened vistas of biology, becomes unconsciously a biologist. His attention to and substitution of biologic illustrations for those taken from geometry and engineering desensitizes him to the importance of some of the simpler fundamental aspects of geometry and logic that must not be omitted. His book makes interesting reading, but the premedical student going through it will emerge with only the vaguest ideas about some matters on which for all his future work he should be crystal clear.

Then to what has the enormously increasing use of the methods of physics in physiology and in medical research been due? In the main, is it not true that usually it is not one person but teams of two or more who, by means of cyclotrons, are producing artificial radioactive materials whose biologic importance is the focus of attention? Do not the increasing uses of detecting and amplifying circuits in neurology and neurosurgery, the adaptations of long established methods in optics and electrolysis now used to separate and segregate various proteins and enzymes by electrophoretic transfer in solutions, and many other illustrations, testify to the efficiency of teamwork between specialists in different fields? If this is true, I submit that the solution of this problem of the premedical student in the physics course will lie in some institution or organization making available the time of three or four well trained young men of a maturity and expertness to be expected in the ranks of senior instructors or assistant professors, and assistant or head residents, and comprising a physicist, a chemist, a physiologist and a clinician. These men must be enthusiastic to devote the best part of a year to this job. Their reward will be great, for they will acquire a liberal education in these specialties from one another. Furthermore, the sponsors of the enterprise should be willing to go "all out" in their administrative organizations to see that such a task is crowned with as much recognition as is accorded similar outstanding and creative work in pure research.

As one example of the methods which the physicist member of such a team could bring to it for adaptation let us glance at one of the new methods which have been developed at the University of Chicago and now are finding adoption elsewhere. This is the demonstration laboratory method. Through it in physics we have been able to increase fivefold the number of experiments in a college physics course and at the same time leave about the same number of hours available for classroom work, problem solving and more conventional laboratory exercises. We do not think much of all that time-honored cookbookery and skullduggery of the traditional and conventional laboratory work. May I appeal to you to give this matter the benefit of your serious reflection. A group such as yours within a week could set appropriate machinery in motion directed toward finding a solution. If, on the other hand, this is not a real problem to you, please accept my apologies for taking precious minutes of your time. If you don't wish to take my word for it, talk to any thoughtful group of premedics or interns about it.

Undergraduate and Graduate Medical Education for Negroes

DR. EDWARD L. TURNER, Nashville, Tenn.: This article will be published in full in THE JOURNAL.

JOINT SESSION OF THE COUNCIL ON MEDICAL EDUCATION AND HOSPITALS AND THE FEDERATION OF STATE MEDICAL BOARDS

FEBRUARY 18—MORNING

DR. JOHN R. NEAL, Los Angeles, in the Chair

The Function of the Museum in the Medical School

DR. WILLIAM BOYD, Toronto: This article will be published in full in THE JOURNAL.

Purpose, Content and Methods of Teaching Public Health to Medical Students

DR. HAVEN EMERSON, New York: This article appeared in full in THE JOURNAL, March 15, page 1040.

The Confused State of the Internship

DR. REGINALD FITZ, Boston: This article appeared in full in THE JOURNAL, March 15, page 1037.

DISCUSSION

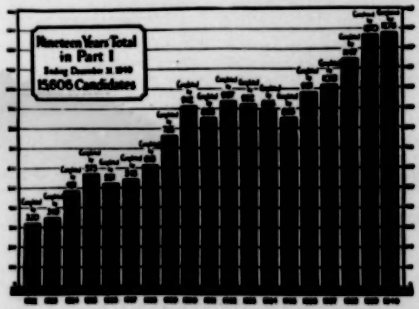
MALCOLM T. MACEACHERN, Chicago: A great deal has been said on the subject of internships and the manner in which they are approved. The tone of the discussions has been somewhat tempered as verbal expression has been supplemented by investigation. The Continuation Report of the Subcommittee on Intern Education submitted to the Association of American Medical Colleges in October 1940 contained the admission that it was difficult to evolve "clearcut standards for the training of interns." The reasons given for the difficulties were the enormous variations in clinical resources, type of service, educational affiliation and financial support of the hospitals offering internships. Of these difficulties, of course, the Council on Medical Education and Hospitals has long been aware. It takes actual, close working with a problem to learn all the conditions that interfere with its solution. I think that there is room for improvement in every activity of the hospital, including professional education, and that improvement can best be achieved by utilization of the interest of every group concerned in any way with hospitals. The internship is more than an educational discipline. It is a start toward putting education to use in a controlled situation. That aspect sharply differentiates it from the medical school course. The chief responsibility for the intern cannot logically be transferred from the hospital heads to the deans of the medical schools. In a few hospitals closely allied with or controlled medical schools there is, of course, formal integration, but how the schools in general could direct the internships in all hospitals is difficult to conceive from a practical point of view, and how the hospitals could adapt themselves to such direction is more problematic because of their great variations. A complicating factor is the withholding of the degree in medicine by twelve medical schools until completion of the fifth year, and the requiring of a year's internship before granting a license to practice medicine by twenty-two states and Alaska, the District of Columbia and Puerto Rico. In 1940 there were eighteen hundred more internships available than there were graduates of the sixty-six medical schools giving four year courses. The quality of internships from both the educational and the clinical point of view could undoubtedly be raised by achieving a better balance between these figures. This might be accomplished by withholding approval from those hospitals which are now barely within the present interpretation of the requirements. Dr. Fitz has spoken of the futility of trying to get action from representative groups because of the many divergent views. I would not say that it is futile. It is the democratic way. In no other way than by endless con-

sulting and conferring can we gain the advantage of the interest and constructive ideas of all the groups concerned. There is an abundance of excellent literature containing conclusions of investigating committees as to the content of the training for the intern year. Special studies fully set forth the educational objectives. A minimum standard for training interns has been developed and promulgated by the American Medical Association. The standard should not be viewed as static; it must be interpreted in accordance with the trends of the day. The Council on Medical Education and Hospitals has an open mind in respect to progressive interpretation of the standard. Machinery has been set up and has been in operation for years by the Council. This survey is a huge task, involving hundreds of hospitals, of which seven hundred and thirty-two are on the last approved list for intern training. I venture to say that more than a million dollars has been spent by the American Medical Association on the surveys of medical schools and hospitals since the movement commenced. Survey work is a special art and science. In the hospital field it requires special training and careful supervision to make men competent in such highly specialized work. Accrediting or approval programs carried on by questionnaires, correspondence, casual conversation, personal acquaintance and the like are comparable to making a diagnosis at long distance on patients you have never seen. Inaccuracies are sure to occur in both cases. Multiple inspections of hospitals for the same purpose should be avoided. The American Medical Association and the American College of Surgeons have a plan of coordination and cooperation in inspections so as to prevent omissions of overlapping in their respective fields. These inspections supplement and complement the work of each organization. It is impossible to police all the hospitals when there are more than seven hundred of them approved for intern training. The fundamental difficulty is that the hospital is not primarily an educational institution. The educational program must be superimposed on the primary purpose of the hospital; that is, care of the patient. The average hospital not connected with a university has economic and other practical difficulties to surmount in its educational program, and all the circumstances in each individual case need consideration before we can arbitrarily withhold approval because the plan seems to fall short on account of educational deficiencies. America has the opportunity to lead the world in medical education, and we cannot put too much thought into laying a good foundation in the medical schools and in the years of internship and training in the specialties. The Association of American Medical Colleges, the Commission on Graduate Medical Education, the Federation of State Medical Boards, the Council on Medical Education and Hospitals and the American Hospital Association should work out this problem together and continue to use the existing machinery for the steady improvement of both the educational and the clinical aspects of medical training. These two phases cannot be separated but must be merged, and both points of view must be integrated to assure the advancement of medical science and practice that we all desire.

The National Board of Medical Examiners as Related to Medical Licensure

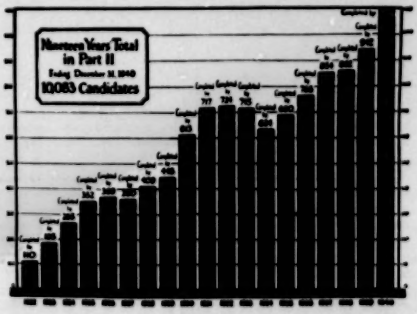
MR. EVERETT S. ELWOOD, Philadelphia: Medical licensure in this country by state boards of medical examiners had its beginnings in a few states in colonial days. The last quarter of the nineteenth century saw rapid progress in the establishment of state licensure boards, and by 1895 nearly all the states were so provided. The National Board of Medical Examiners has no licensing power and could not obtain this power if it so desired. Its work is related to medical licensure only through the cooperation of the state boards of medical licensure. The National Board is a qualifying body that was organized for the sole purpose of examining applicants for licensure. The certificate which it gives the physicians who pass its examinations is recognized and accepted by nearly all the state boards as a proper passport at the gateway to medical practice.

When the National Board was launched twenty-five years ago, reciprocity between the states in respect to medical licensure was almost unknown. This board was inaugurated to provide the means whereby well trained men and women in medicine could obtain a license in any state without being required to pass an examination whenever they crossed state lines. Soon after the National Board was organized, eight states reported that they would accept its certificate as an adequate qualification for a medical license. At present forty-three states, three territories and the District of Columbia issue medical licenses to those who have passed the National Board examinations without requiring that these applicants take further written examinations. It is this cooperation on the part of the state boards that gives the National Board a part in the process of medical licensure. There are now only five states that do not cooperate with the National Board of Medical Examiners, and the state boards of nearly all these have given assurance of their desire to cooperate as soon as certain legal and other difficulties can be composed.



Results of examinations in Part I of the National Board of Medical Examiners, taken by 15,606 candidates during the nineteen years ended Dec. 31, 1940.

The National Board is a composite organization with a maximum of thirty members, five of whom are representatives nominated by the Federation of State Medical Boards. Six memberships include the three surgeon generals of the Army, Navy and Public Health Service, and a second representative from each of these three services. Three members are representatives of the Association of American Medical Colleges and two additional members are representatives from the Council on Medical Education and Hospitals. The remaining minority members are elected by the board.

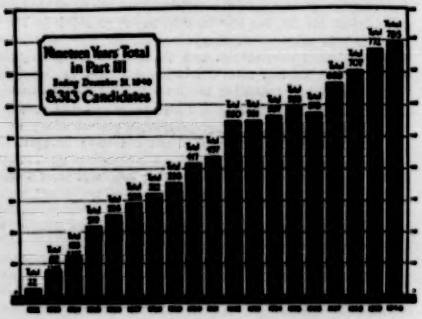


Results of examinations in Part II of the National Board of Medical Examiners, taken by 10,083 candidates during the nineteen years ended Dec. 31, 1940.

As the work of the board has developed, other benefits have proceeded from its examinations. These are more or less of a

professional nature. A high type of examination given three times a year on a nationwide basis has been said to be one of the best barometers of medical education in that the various schools may have the results of their students in the examination to compare with the results throughout the country. It is also of some professional value to the physician himself to have a certificate which says that he has passed what is generally recognized as the most thorough examination for entrance into the practice of general medicine.

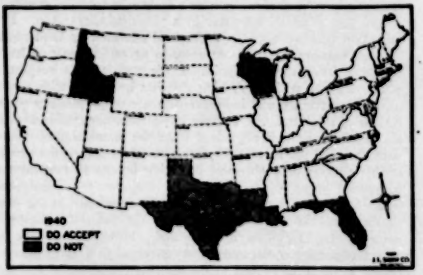
There are undoubtedly grounds for criticizing examinations because the best examinations are not yet perfect. This may be said of all methods thus far devised for the appraisal of mental capacity. The deans of many of the medical schools



Results of examinations in Part III of the National Board of Medical Examiners, taken by 8,313 candidates during the nineteen years ended Dec. 31, 1940.

have stated that the examinations given by the National Board have been of real value in the operation of their schools. A few schools have made these examinations a part of their educational system by using them as a substitute for their own comprehensive examinations. The members of many of the state boards have also generously stated that the examinations have been of help to them in the conduct of the state board examinations.

It would be a mistake to say that the present cordial relations that exist between the state boards and the National Board of Medical Examiners have always been entirely satisfactory. There is at present one practice which obtains in certain states



Acceptance of the certificate of the National Board of Medical Examiners by the various states.

that should be changed as soon as possible, not so much for the benefit of the National Board as for the benefit of the young men who are just entering medical practice. This is the custom which some state boards follow of charging all diplomates of the National Board, whether they have previously been licensed by another state or not, the full reciprocity fee for their medical license. A problem that has given the state boards and the National Board much concern is the great increase in the number of foreign-trained physicians who have applied for examination and licensure. Some of the state boards have adopted the requirement that the foreign-trained physician must pass the National Board's examinations. The National Board has been willing to assume this burden for the sake of doing its share in the solution of the difficulties presented by the foreign-trained physician.

The basic science boards, of which there are now fifteen, have in a number of instances placed a check on reciprocity between the states and have complicated the granting of medical licenses on the certificate of the National Board. There is apparently no adequate reason why the basic science laws should not contain a provision giving the board discretionary authority to endorse an examination of such proved quality and character as that of the National Board. Generous and complete cooperation on the part of all of us is the only way in which our lofty purpose can be fully achieved.

DISCUSSION

DR. ROY B. HARRISON, New Orleans: The National Board of Medical Examiners has reached the stage where it is part and parcel of licensure. The cooperation that the National Board has given to the different licensing boards has been happy. Its examination I think is one of the best licensing examinations that are given, and as time goes on it is going to play a more prominent part in licensing. Owing to technicalities, Louisiana has not been able to recognize the National Board certificate. All the members of our state board are in favor of it and, I am happy to say, I think that within a year all these technicalities will be smoothed out and that we shall recognize the National Board.

Basic Science Boards and Medical Licensure

CHARLES CARTER, PH.D., Fairfield, Iowa: Since the organization of the first basic science boards in Wisconsin and Connecticut in 1925, states from the Atlantic through the Middle West to the Pacific Coast have set up such boards. No state having established such a board has discarded it. The objective of basic science boards is to insure that all candidates seeking the right to care for the sick and the injured shall possess a reasonable knowledge of the sciences fundamental to the healing art. A basic certificate is only a preliminary step toward licensure. Until there is greater uniformity among the states as to the scope and thoroughness of the examinations, a basic science examination should not be substituted for any part of the tests employed in determining the fitness of a candidate for licensure.

There are weaknesses in these examinations as there are in all examinations. They are not always a test of knowledge. The educational requirements for admission to examinations is a four year high school education. If the candidate passes, he is entitled to a certificate. If he fails, he may take the examination at a later date without any evidence of advanced training. By a series of crams and drills in questions and answers from a compendium, he may pass at the second trial or at the third or fourth. This weakness of the system must be corrected. Rhode Island is to be congratulated on evidence of professional training beyond the usual high school course. Some boards have set a 70 per cent minimum for passing. Others have 75 per cent. This lack of uniformity causes disturbances when holders of certificates ask for reciprocity. A conference of basic science board members held in connection with federation meetings might result in a better understanding of disturbing problems.

The Iowa board has six men appointed by the governor from the faculties of the state schools and independent colleges. They are not medically trained. Each man prepares his examination questions and grades the answers in his own field. This method is at variance with practices among other boards. In some cases the boards are wholly executive. The examinations are set by experts or are taken from lists of questions formulated by

persons other than board members. The Iowa board permits teachers to set an examination without regard to medical content. Since the examiners are not medically trained, the objection to the basic science law that it is administered by a group in its own class falls.

The Iowa law sets out the usual basic science subjects and attempts to evaluate them in hours. Our board early in its history set the equivalent of these hours into semester hours. Our questions are prepared on that basis. This weighting of subjects has a value over the uniform evaluation of some boards. The time has not come to set a board for all boards, but perhaps the idea is not fantastic. In 1939 all boards examined 1,359 applicants. The percentage of failures was 18.3. In the thirteen years since 1927, 11,660 individuals have been examined. The continued growth of the basic movement indicates that it is gradually attaining its objective.

DISCUSSION

DR. THOMAS P. MURDOCK, Meriden, Conn.: The specific cause for the adoption of the basic science law in Connecticut was the national eclectic scandal in the years immediately preceding 1925. The law was passed on June 23, 1925. The board requires as preliminary education a high school certificate or its equivalent, but in addition to that, by rule of the board, it requires the same requirements as the board before whom the candidate finally appears. This rule of the board has not been successfully challenged to date. The act in Connecticut is called the "Healing Arts Act." The board examines in anatomy, physiology, hygiene, pathology and diagnosis. A certificate from the Healing Arts Board is a prerequisite for appearance before the final and specific boards. One thousand, two hundred and fifty-four individuals have appeared before the Healing Arts Board. This does not take into consideration the repeaters. Of this number, one thousand, one hundred and twenty-five have been medical men with twenty-eight failures, or 2.4 per cent. Ninety-nine have been osteopaths with seventeen failures, or 17.1 per cent. Twenty-six have been chiropractors with fifteen failures, or 57.6 per cent. Four have been naturopaths with three failures, or 75 per cent. In other words, in the fifteen years eighty-two osteopaths, eleven chiropractors and one naturopath have been successful before the board. The law further provides that diplomates of the National Board will be certificated without examination. Men in practice in another state for a period of five years or more are not required to take the examination. Men in practice in another state for a period of three to five years must be certificated by the Healing Arts Board. In this time four hundred and thirty-seven men have been so certificated and all have been medical men. The Healing Arts Board in Connecticut has been most cooperative. The people and the medical profession owe it a debt of gratitude.

FEBRUARY 18—AFTERNOON

What Is Wrong with the Teaching of Materia Medica and Therapeutics in Medical Schools?

DR. ADAM P. LEIGHTON, Portland, Maine: For twenty-six years I have been a member of the Maine Board of Registration of Medicine. We have given comprehensive, fair and practical examinations in all these years. The doctor of medicine who graduates today is a better man in theory at least than was he who graduated shortly after the turn of the century. I believe, however, that the present-day graduate lacks much of the practical knowledge that was ours, especially in the administration of drugs as therapeutic agencies. When I graduated, the men from my school could write a prescription correctly and in proper Latin form and we knew there was such a thing as a National Formulary and a U. S. Pharmacopeia. That is more than I can say for the schools of today.

Two years ago the Maine Medical Association and the Maine Pharmaceutical Association commenced the exchange of delegates to their respective annual meetings. I think it is time the medical and pharmaceutic brethren met together for consideration of the many professional matters with which we are closely concerned. We can learn much that is mutually profitable by meeting regularly together. A druggist from Maine stated to me that a young doctor who recently located in his town came into his store and said "I'll have to have your help! I really don't know how to write a prescription." I knew the young man as a graduate of one of the leading medical schools.

As secretary of our board I do not routinely take part in the actual examination of applicants. In the last five examinations given by the Maine Board, however, I have set the questions in materia medica and therapeutics. Fifteen out of the eighteen applicants who took the examination in November 1940 did not attain the passing average. After its completion, several men came to my office and each one admitted that the examination was fair but he "knew he hadn't passed it." They stated it was about what they expected, for they were not being taught materia medica and therapeutics adequately in their schools. Certain members had complained to the dean of their institution regarding the teaching, but to no avail.

After giving them an additional oral examination, I realized that a few did have fair comprehension of pharmacology and, with the promise that they would seek out some druggist or other suitable person and attempt to learn to write prescriptions, I passed nine of them. The other nine will have to be reexamined, for their ratings were from 17 to 50 per cent. Do their teachers plan that they shall supplement their collegiate instruction by a postgraduate course given by detail men from pharmaceutical houses? The medical profession has "put over" too many nostrums, "patent medicines" and low grade proprietaries. I had occasion a few weeks ago to look over a druggist's prescription file of a week previous. I counted fifty-one so-called prescriptions before I came across one that was written correctly or scientifically and which called for official drugs and medicines in its compounding. The members of the medical profession have been shortsighted, because in later years they have been wont to cast aside their knowledge of materia medica.

The medical student should be given a course of adequate instruction during his medical study which would guarantee that he was properly schooled in his materia medica before he attempts to obtain licensure.

DISCUSSION

DR. CHAUNCEY D. LEAKE, San Francisco: The question that has been raised is extremely important. Our medical schools teach pharmacology but they do not teach materia medica and there is no room provided at present in the curriculum for materia medica. Materia medica is a subject that has to be taught in the clinic by clinical example and with clinical precepts, and it is difficult to handle materia medica in a way that is at all adequate in a pharmacology setup. It is important that we begin to understand one another with regard to these matters and that we come to agreement as to what is desirable from the standpoint of the public with respect to drugs. I agree with everything that has been said with respect to the unwarranted and indiscriminate use of proprietary preparations of all sorts. All courses in pharmacology with which I am familiar are well organized from the standpoint of dealing with chemical agents and they attempt to show how the demonstrable actions of a chemical on living beings in general may be applied in accordance with one's judgment to clinical problems; but that is something that can be done only in the clinic to advantage as far as carrying over the point that has been made by Dr. Leighton is concerned. However, we are not taking advantage of the opportunity involved in modern pharmacology if we limit it only to therapeutics, because the action of many drugs on living beings may be utilized in diagnosis, in prevention, in addition to therapy and for many other purposes. The action of chemicals on living beings becomes important in industrial hygiene, in connection with household poisons, and with the exposure that we are increasingly having to chemicals of all sorts. The fact simply is that our knowledge has gone so far ahead of the time allotment for adequate teaching in accordance with the ideals that we hold that we are stuck. Now

the recommendations that you make, as a body retaining social control over licensure, will, of course, have paramount importance in teaching. We must, as teachers, yield to what you want and expect, but we cannot do our job in teaching in the way that you want until we get ourselves together, as we are doing in this meeting, to talk over these problems. There are reasons. For example, in the teaching of pharmacology most pharmacologists prefer not to burden students with the apothecary system or with Latin. If, however, you feel that we must continue to teach the apothecary system and the use of Latin, then we shall have to do that. That is just one more thing to do, and if we have to do it you may expect that your students will not get adequate preparation in something else. We are limited by time and you must tell us what you think is most important to put into that time.

DR. STEPHEN RUSHMORE, Boston: Dr. Leighton asks the question Is the graduate of today as well prepared as was the graduate of twenty-five years ago? His immediate answer is, in substance, "Yes, of course," but later he qualifies it. I agree with the qualification, because while the candidates may be in some respects far better prepared than they were twenty-five years ago, in other respects they are not as well prepared and their knowledge of materia medica and drug therapy is distinctly inadequate. Dr. Leighton's thesis is that the teaching of materia medica and drug therapeutics is seriously wrong. He does not specify in what respect it is wrong. He bases his conclusions on his experience with these examinations and he uses the November 1940 examination as an illustration. Of course, he would not draw sweeping conclusions from one examination of that sort. I call your attention to the fact that, of ten questions, five were in writing prescriptions. Of course, if the physician prescribes medicine it is necessary that the prescription be clear, correct, intelligible and with proper directions for the patient, so that the patient understands what to do with the medicine when it is obtained from the druggist. I do not see why it should be in Latin. I do not see why he should use one system of measurements rather than another. In considering a field so vast there is danger in getting lost in detail. What has happened in the field of materia medica and drug therapy is that the content has been tremendously increased in recent years. It has been so increased that many persons think that in the medical course the student can be given only a smattering of this subject. Well, in a modern, scientific course in medicine there is no place at all for a smattering of any subject. What has happened is that in this field there have been set forth explicitly by the teacher for the benefit of the student no guiding principles. If it was possible—and I think it is—to make explicit for the benefit of the students and to formulate for them certain guiding principles in materia medica to which they could cling, I think it might be a permanent contribution to their medical experience. If the physician is fortified by a grasp of these fundamental principles, he is able to find his way around in materia medica in the vast fields which he cannot take up thoroughly in medical school, and he is much better prepared to care for his patients. He may even obtain a judicial skepticism with reference to the claims of the commercial interests, so that when the detail man comes to his office he is prepared to meet him and to understand how much there is of salesmanship and how little often there is of scientific medicine. What we want to give the student is balance, perspective, so that he won't be thrown off his feet by some passing whim in drug therapy. We are indebted to Dr. Leighton for his calling attention to this important problem.

DR. ADAM P. LEIGHTON, Portland, Maine: I hope that the time has come when we shall wake up to the fact that we are not pseudomedical practitioners. We are medical men, and if it has come to such a pass that the medical curriculum is so full of important things that materia medica and therapeusis and proper treatment, the giving of relief to our patients is to be cast aside, I say let's think it over. Let's get rid of some of the nonessentials. Let's stimulate our course in materia medica. Let's teach our boys to practice medicine, not to be pseudomedical practitioners.

A Naturopathic Subterfuge: Purported Licensure by State Naturopathic Associations

J. W. HOLLOWAY JR., Chicago: This article appears in full in this issue, page 1706.

DISCUSSION

DR. GEORGE M. WILLIAMSON, Grand Forks, N. D.: I come from a state where we have just had some actual experience and we came out fortunately. In April 1938 the North Dakota Naturopathic Physicians, Incorporated, was incorporated as a private corporation at Bismarck. Its purposes were to examine applicants who might be licensed to practice naturopathy in the state of North Dakota. It developed that this corporation proceeded to issue licenses to various members of this corporation. As each of the members of the corporation who received a certificate from the Board of Naturopathic Examiners professed to be a naturopathic physician, an action was started in May 1940 by the North Dakota State Board of Medical Examiners to annul and cancel the corporate charter of the corporation. Some rather amusing conditions came up in connection with this act. Unfortunately they got one fellow in who was a successful masseur, and he was the vice president. They said they could make him a naturopathic physician if he would join with them. He did and was active until the general counsel for the board filed a complaint, whereupon he became frightened and engaged an attorney to see how he could get out of the Naturopathic Physicians, Incorporated. He gave us a great deal of information. Our counsel filed complaint and went before the district judge. The judge overruled the demurrer and gave them thirty days in which to put in an answer to the complaint and assessed them $25. This was instituted against all the naturopathic physicians and every person who had a naturopathic license in North Dakota. At the end of thirty days the judge overruled the demurrer and assessed them $25. The judge issued an extensive opinion. Mr. Holloway showed you some photostatic copies. There is the real naturopathic physicians' certificate issued to one fellow who sent this up a few days before I came away with his check for $67.70. There are about thirty naturopathic physicians of whom we know, and we shall try to collect $67.70 from all of them.

Medical Laws and Their Enforcement

DR. JULIAN F. DU BOIS, Secretary, and F. MANLEY BRIST, Attorney, Minnesota State Board of Medical Examiners, St. Paul: In 1883 the legislature of Minnesota passed a law creating the Minnesota State Board of Medical Examiners. From 1883 until 1927 the board took no part in the investigation of quackery, having no funds with which to carry on the work. Only on a rare occasion was there a prosecution of a person charged with practicing medicine without a license. Likewise it was rare when a licensed physician was disciplined by revocation of his license. In 1927, with the endorsement of the Minnesota State Medical Association, the legislature enacted a basic science law which also requires every physician to register with the state board of medical examiners during January each year and to pay a registration fee of $2 a year. This fee produces about $8,000 a year in revenue in addition to $6,000 from examination fees paid by new applicants, making it possible for the board to obtain the services of a lawyer to investigate persons who practice medicine without a license, complaints against physicians of such a nature as drug addiction, violations of the Harrison Narcotic Law, criminal abortions and professional misconduct in general. The success of the work is due in large part to the splendid cooperation that has been given by all of the various law enforcement agencies.

Occasionally the board has found it necessary to institute criminal proceedings against osteopaths and chiropractors. These two groups are licensed in Minnesota by separate examining boards, but every so often one of their number goes beyond the scope of his license and engages in the practice of medicine. These cases are handled in the same manner as cases against unlicensed practitioners. Since the passage of the Minnesota basic science law there has been a large decrease in the number of osteopaths and chiropractors licensed to practice in our state. The accompanying table gives a bird's eye view of licensure in Minnesota.

The medical board in Minnesota has been confronted with another type of imposition on the public which concerns so-called itinerant health lecturers. This group always has a long array of titles but invariably is short on licensure. The board had an investigation made, with the result that the quackery in this type of racket has been exposed and greatly minimized. In one of these prosecutions a young woman announced through the public press that she would give health lectures, for women only, at a leading St. Paul hotel. The medical board in cooperation with the St. Paul police department discovered that she had a business connection with a Kansas City osteopath and that her real purpose was to lecture and then sell the women a variety of concoctions at prices ranging from 50 cents to $5 a box. A warrant was issued for her arrest for practicing healing without a basic science certificate. It was estimated that she had taken in between $500 and $1,000 during her week in St. Paul. The defendant contended that she was not practicing healing and the case was certified to the Supreme Court of Minnesota, which held that the defendant was engaged in the practice of healing. Following this decision the defendant entered a plea of guilty. The board then noticed that a new crop of health lecturers was attempting to evade this law by giving a lecture and then attempting to enroll members in a class of instructions which would be sent to them from outside the state and which were accompanied by medicinal preparations for the use of the individual. A complaint was issued against one of these so-called health lecturers charging him with practicing healing without a basic science certificate. When arraigned in court he pleaded guilty to both charges and contributed about $450 to the treasury of Morrison County.

Licensure in Minnesota

Osteopathic licenses issued up to 1927	465
Osteopathic licenses issued 1927 to 1940	59
Total number osteopaths registered in Minnesota in 1940 (A loss of 300 osteopaths, or 64 per cent)	165
Average annual number of osteopathic licenses issued 1922 to 1927	10
Average annual number of osteopathic licenses issued 1927 to 1940	5
Chiropractic licenses issued up to 1927	592
Chiropractic licenses issued 1927 to 1940	27
Total number of chiropractors registered in Minnesota in 1940 (A loss of 213 chiropractors, or 36 per cent)	379
Average annual number of chiropractic licenses issued 1922 to 1927	46
Average annual number of chiropractic licenses issued 1927 to 1940	2
Number of physicians and surgeons registered in Minnesota in 1928	3,402
Number of physicians and surgeons registered in Minnesota in 1940 (An increase of 1,242)	4,160

Since January 1928, when the medical board first employed the services of special legal counsel to aid in the enforcement of the medical laws, we have conducted five hundred and twenty investigations. One hundred and ninety-five persons have been arrested for violating the medical laws, of whom one hundred and sixty-seven were convicted, twelve were found not guilty, fourteen cases were dismissed, one person forfeited $750 bail and one died.

One hundred and three physicians were brought before the medical board in disciplinary actions, resulting in twelve having their licenses suspended, nineteen having their licenses revoked, sixty-seven being reprimanded and five with no action being taken. The medical association has encouraged the board to clean out disreputable physicians irrespective of whether or not they hold membership in that organization.

Professional Delinquency

Dr. Irvin D. Metzger, Pittsburgh: As the young physician faces the perplexities of medical practice, he learns of many problems aside from those of diagnosis and treatment. Ignorance, poverty, charlatanism, pseudoscience, physical and mental perversions and other disconcerting factors thwart his efforts in preconceived plans and seem to be overwhelming barriers to success. To survive, it means for many young physicians a tolerant acceptance of the conditions. Routinism with submergence of his lofty conceptions is apt to be the result. Few accept these problems as a challenge and by prodigious effort rise above them. The physician is trained to rely on himself, especially in respect to the care of his patients. It is this traditional policy that has ennobled the profession. However, this self-concerned attitude is apt to involve him in difficulties when it reaches beyond the jurisdiction of his professional province. Narcotic irregularities, vital statistics slips, quarantine oversights, registration omissions and other inexcusable delinquencies show his narrowmindedness in respect to matters outside his professional realm. Judicial leniency in his first offense is apt to encourage this indifference until, eventually, he becomes involved in graver misdemeanors.

One essential requisite for licensure is a knowledge of medical law, of professional ethics and of responsibility in respect to character in medical practice. Laxness in such matters, therefore, reflects on the physician's worthiness to continue in practice. Moral laxity becomes a pitfall to many promising physicians. Their high calling should prompt them to rise above the boorish vulgarities of life. The high quality of leadership of noblemided physicians exhibits the fact that they were not only good doctors but that they were great men.

It is disconcerting to hear students say that medical practice will assure them of a good living rather than say that it will guarantee them a serviceable life. Building into their minds essential knowledge means also a simultaneous reconstruction of ideals in the application of this knowledge. Science may be a direful weapon for ill as well as a beneficent boon for good. The world is looking for practitioners who will remain loyal to their inherent urges for mental and moral stability. I wonder whether medical colleges are developing such minds.

The happy-go-lucky candidate of a quarter of a century ago no longer appears for medical licensure. The modern applicant is serious minded and mature.

The art in medical training, sadly neglected in the past, is being recaptured through intern apprenticeships. Another difficulty, however, arises from this very means of professional perfection. The overinstitutionalization of these novices in medical practice tends to result in professional weaklings when they are compelled to rely on their own initiative. This accounts for their attitude toward assuming rural practice, as has become so evident in recent years. Furthermore, the elective internships, and the desire to keep good prospective physicians as residents year after year tend toward the development of amateur specialists and robs communities of the services of the best of the college output. The already high percentage of specialists is disconcerting, especially with the increasing cost of medical care and its reactions. We need specialists of a still higher grade of efficiency, but to bring forth an excess of mediocre ones at the expense of communities that need promising general practitioners seems shortsighted. An intensive apprenticeship internship of a limited length of time during which all the branches of medicine are covered gives a comprehensive outlook to the practice of medicine and leads into general practice for which the need is progressively increasing.

Professional people are the stalwart people of any civilization. Most of the professionals readily assume their public responsibilities, but rarely the physician. All praise to them for their whole-souled devotion to professional duty, but much blame for their failure to recognize their equal duty toward the larger and more urgent needs of state and nation. Their responsibility reaches into every phase of human life. With nobler purposes, medical schools might well modify their courses to develop a saner philosophy of medical practice and thus send out physicians who not only can rescue lives that are threatened by disease but also can help to evolve a higher and safer course of living.

Engineering schools are establishing courses in psychology and sociology as essential in the training of graduates who shall deal with material things; how much more should medical schools prepare their graduates in these branches which are peculiarly essential to a thorough understanding of human beings? A deficiency in medical preparation also is shown by the inability of the average physician to deal with mental maladies. Fortunately, governments are now constructing hospitals near medical schools so as to induce the more critical study of such

cases. More thorough instruction and more practical training in this line of care to graduates is an imperative duty facing each medical school.

Finally, there is no legal way to halt the activities of unworthy practitioners except in the event of a gross misdemeanor. Our hope of maintaining high ideals and of securing continuously efficient work in practitioners rests largely on the organized medical societies. It behooves those of higher integrity to help the weak. By so doing in medicine we may raise the standard of all, assure better service and thus prove ourselves worthy of this noble calling.

Residency and Problems of Interstate Endorsement

DR. J. W. BOWERS, Fort Wayne, Ind.: Interstate endorsement of medical licensure is one of the outstanding accomplishments of the state medical boards. Endorsement has never been obligatory but a courtesy extended to the applicant desiring to move from one state to another. The public interest and that of the profession and of medical education would be better served by a satisfactory method of endorsement of licensure by all state licensing bodies endorsing without further examination the license of an applicant previously obtained by examination in another state whose standards of education and examination are not lower than their own, provided the applicant is a graduate of a medical school in the United States and its possessions which at the time of his graduation was on the list of approved medical schools.

Many states have basic science boards for the purpose of examining all applicants in the basic sciences before they are admitted to licensure. In the case of interstate endorsement, the applicant is required to be reexamined before a basic science board regardless of his scholastic qualifications, the time spent in his profession in the practice of medicine and the fact that he has passed these basic science subjects at the time he qualified for licensure in another state. This works a hardship on such applicants. There is no objection that all should pass a basic science examination prior to the original licensure; in fact, it is an essential. But all graduates of our schools today do take the basic science subjects in examinations, whether it be before a specific basic science board, before a state board of medical examiners or before the National Board of Medical Examiners. In view of these facts, all applicants who take a recognized board examination do qualify in this respect, and it is recommended that they receive the benefit of endorsement reciprocally to basic science boards, state medical boards or the National Board of Medical Examiners and be exempt from reexamination in the basic sciences.

Some state boards require a practical examination of all applicants for interstate endorsement. This not only places a barrier to friendly reciprocal relations but compels other state boards to set the requirements of a like examination to meet the demands of those desiring to obtain a license in their state.

Most states require a period of practice, or residency, in a given state before accepting the applicant reciprocally. When these rules were made, universal internships, residencies, fellowships, trained specialists and technical men were not known. But today, after serving internships and residencies, the applicant does not know what state will present the opportunity or position of which he is desirous, and this may be a barrier that would prevent his acceptance of a position. It is recommended that there be no time of practice, or residency, required in any state prior to application which would deprive the applicant the courtesy of endorsement. Annually there are about three thousand physicians licensed by interstate endorsement. In the interest of fair recognition to licensed physicians, all boards of the United States should be in accord. Superfluous rules and red tape should be eliminated and endorsement of license be based on scholastic qualifications, moral and professional character, and equal requirements in the respective states at the time the original licensure is granted. The time has arrived when state boards of medical examiners should have more uniform requirements and a better understanding in order to meet the demands of the times effectively.

DISCUSSION

DR. E. S. RYERSON, Toronto, Ont.: I happen to represent our university on our provincial board, and at our last two or three meetings we have had a problem with reference to how to deal with certain medical men who happen to have been in mental institutions. Dr. Metzger mentioned that we should be more capable of handling mental conditions as far as our patients are concerned. Certain mental deficiencies occur in the members of our profession as they do in the public. One young man was in an institution for some time and was discharged as being capable of carrying on, but certain of his fellows where he is practicing are a little nervous about his condition. By cooperation we got him to agree to have a psychiatric examination once every six months for two or three years to make sure that he isn't sick, but there is no way by which we can compel him to do so. An older man is willing to go into an institution but the institutional officers and psychiatrists say that he is not sufficiently upset mentally that he should be in an institution. He is capable of carrying on where he is an ordinary citizen, but he is not capable of carrying on as a medical practitioner. We have no way of striking his name off the register. I should like to know whether any of the states have any means whereby medical men who become mentally incapable of carrying on their practice can be dealt with.

DR. I. D. METZGER, Pittsburgh: We have the same problem in Pennsylvania. There are about a dozen and a half doctors in insane institutions more or less constantly. Once in a while one of them runs away and practices and does some bad work and the report comes to us that he has done so, and the district attorney who has to prosecute him wonders why we did not take his license away. We have before the legislature a bill, an amendment to the act, which makes possible stopping that person in practice if it passes. We have a registration act, which is a working act very much like a driver's license to drive a car. This working license or registraton does not affect the licensure. The amendment which we are now proposing is that any one who is committed to a state institution shall automatically have his registration suspended. It does not catch the ones who voluntarily go into institutions. The amendment further states that they shall not have the registration reinstated until they comply with the act which has to do with suspension or revocation of licenses in other respects, which means that they must have a hearing and have certification. We wanted to take the license away from these men. The institutions would not say that they were insane. It put them on the spot, as they said, and we could not have a trial because we had no definite evidence of any one who was willing to swear to the fact that they were not fit to practice, and the effect was that we could not do anything. By this registration act we may stop their practice. In our state every practitioner of medicine must register annually to practice legally in the state. His licensure gives him the right to practice but not to enter into the actual work of practice.

DR. H. M. PLATTER, Columbus, Ohio: I do not believe that Dr. Metzger answered Dr. Ryerson. I believe that a man is sane until he is declared insane. Now when he is declared insane so far as Ohio is concerned we can get a service on an insane person. However, the effect is equivalent to a suspension. During all the time that he is declared insane his license is automatically suspended and it is not restored to him until the court declares him sane. There are obstacles in procedure in cases of this sort, but if the state authorities in charge of the insane institutions will do their duty and not certify men as sane who are still suffering from mental derangement the problem is solved. It is hard to bring action against an insane person. In some states there has been a requirement by which any proceeding may be instituted against a man who commits an indiscretion during his period of insanity. That particularly applies to damages that he inflicts during his period of insanity. I don't believe, generally speaking, that much can be done with a man until there has been an action instituted and a competent tribunal has passed on his insanity, and I think when that is done his license is automatically suspended.

MR. J. W. HOLLOWAY JR., Chicago: I don't think his license would be automatically revoked. As far as his license is concerned, it would still be valid. We had a letter from an attorney in California who was investigating the states in which an attorney's license could be revoked because of insanity. He wanted to know what the situation was with respect to medical licensure. I went over the medical practice acts to see in what states a physician's license could be revoked on account of insanity, and there are only six or seven states in which the medical practice acts definitely provide that a license can be revoked for insanity. We also went over the indexes to the medicolegal cases that have been decided in the last twenty years and could find no instance in which a license had been revoked for insanity.

DR. ARTHUR T. MCCORMACK, Louisville, Ky.: With regard to the matter, we have adopted a resolution that when the superintendent of an institution for the insane certifies that a man has been committed to his institution he is suspended, and we notify the county clerk that the man has been judged insane and incompetent to resume the practice of medicine. About eighteen men in the state are suspended under that regulation at present and none of them have attempted to practice.

DR. JULIAN F. DU BOIS, St. Paul: If I understand the problem, we have answered one half and not the other half. We have a solution in our law for that because conduct unbecoming a person licensed to practice medicine or detrimental to the best interest of the public may bring the person before our board. I am under the impression that we had one doctor who was committed and was released to a guardian. We had an agreement with his guardian that we would do nothing as long as his guardian saw to it that he did not practice medicine and that if his guardian was removed we would revoke his license. The other one was apparently a mental aberration. We waited until there was a complaint against that individual and then brought him in on the complaint. If a man is mentally unsound soon there will be a complaint on his conduct, which gives our board the right to call him in, hold a hearing, discipline him, suspend him or revoke his license.

FEBRUARY 17—FEDERATION DINNER

Medicine in National Emergencies

DR. RAY LYMAN WILBUR, Stanford University, Calif.: The massive plans we are making at present for our democracy must have a profound influence on every part of our population. To take hundreds of thousands of young men out of their homes and out of industries and put them under a military regimen is a major operation. When we add the marshaling of industry, the development of new plants in remote areas and the building of ships, we bring in almost all the elements in our population. A part of our economic maladjustments has come from the diversion of women from the home into outside jobs. It has gone so far as seriously to change family life, to affect the birth rate and to increase the responsibilities of the schools. We see abroad the requirements that medicine must meet in a war-torn world. Some of these must be kept constantly in mind that we may not lose the advantages which we have gained for the human race. Total war means such destruction and interruption of the essentials of collective living that every effort should be made to avoid war. The more complicated the community, the more damaging is total war. When water supplies are interfered with, the transportation and distribution of food made difficult and all systems of heating, lighting, refrigeration and communication paralyzed, the problems of medicine become almost completely transformed. Modern sanitation and preventive medicine provide no guaranties against pestilence and famine. A whole chain of new physical ailments appears with a diminishing food supply. Epidemics arise. As long as we maintain war as a method of settling difficulties we are denying to the human race the benefits that medical science can offer when there are well ordered surroundings. If young men are subjected to military training they may give evidence that they are better off physically than those in the population who remained at home.

In military service there is the opportunity of careful physical examination and of free hospital and medical care during a period that has unusual hazards but which in many ways is not very different from that of aggregations of men working in industrial plants. One of the differences is the dislocation of the individual from the ordinary relationships of family and community life and the redistribution of males which takes place in a community. There is more definite exposure of the individual to communicable diseases.

One of the most serious factors has to do with the mental health of the soldier. The greatest discretion should be used in admitting to military service only those with sound nervous systems. Everything from war anxiety to so-called shell shock is likely to result in those who have minds that can be turned over easily. Large elements in our population have insufficient instruction in health care. Others are subjected to social conditions that together with their special susceptibilities make them more easy prey to tuberculosis and syphilis than at present in the rest of the population. Such individuals, brought together into army service, with adequate physical examinations and medical care can, if properly protected, be returned to civilian status in better condition than when they entered military service.

The family and war are naturally antagonistic. The family requires the conditions of peace for its proper protection. To take away from the family the head of the household for military service is damaging enough in itself. To remove young men from their normal social relationships and environment and give them little contact with wholesome women is in itself a great social injury. Since it is on the family that all the future of society rests, every effort should be made, in spite of the exigencies of war and national emergencies, to keep the family intact and to preserve its food supply, its tranquility and the education of its younger members. The family doctor is useful at all times, but at no time is he more useful and more needed than during war time. His guidance as to food supply and protection from epidemic and other diseases becomes of unusual importance. There can be no superior human family until the young and most vigorous males are protected from death in battle, and young women can raise their families in an atmosphere of peace. The very best of medical service should be available for those in the military services. This means that the leaders in every field of medicine must provide it or see that it is provided, as is now being done in the United States.

The massive blows to normal human society that come from war are responsible for a chain of problems that weight us and other nations down at present. At every point, whether it is in industry or in education, the scientist and the physician are needed if the most effective results are to be obtained. Now that we are going to face an emergency, it is vital that we begin to foster every sort of social action which is on the constructive side. Medicine's service to society, through hospitals, medical schools, clinics, doctors, pharmacists and nurses is made up of men and of things. As far as the things are concerned, there will be more hospitals developed and the government will project itself with ever increasing financial responsibility into the hospital field. The medical schools will be either protected or harmed in accordance with the wisdom of those handling the Army and the Navy. Physicians will be redistributed in many new ways. In other words, there is a war distortion of the machinery of medicine that is recovered from only after years of peace.

Modern medicine depends on the constant growth of knowledge. Every potential doctor who is diverted from medicine and made a military figure means a permanent loss. Those who are the custodians of the medical knowledge that has been gathered throughout the ages should be a guardian group to make every effort to make medical service effective in emergency, but, above all, we must preserve medicine for the future.

The Status of Drugless Healers in the United States

DR. JOHN R. NEAL, Chicago: This article appears in full in this issue, page 1736.

Medical Examinations and Licensure

NATIONAL BOARD OF MEDICAL EXAMINERS

EXAMINING BOARDS IN SPECIALTIES

Examinations of the National Board of Medical Examiners and Examining Boards in Specialties were published in THE JOURNAL, April 5, page 1599.

BOARDS OF MEDICAL EXAMINERS

ALABAMA: Montgomery, June 17-19. Sec., Dr. J. N. Baker, 519 Dexter Ave., Montgomery.

ARKANSAS: * *Medical*, Little Rock, June 5-6. Sec., Dr. D. L. Owens, Harrison. *Eclectic*, Little Rock, June 5-6. Sec., Dr. Clarence H. Young, 1415 Main St., Little Rock.

CALIFORNIA: *Oral examination* (required when reciprocity application is based on a state certificate or license issued ten or more years before filing application in California), San Francisco, April 16. *Written*, San Francisco, June 30-July 3. Sec., Dr. Charles B. Pinkham, 1020 N St., Sacramento.

DELAWARE: July 8-10. Sec., Medical Council of Delaware, Dr. Joseph S. McDaniel, 229 S. State St., Dover.

DISTRICT OF COLUMBIA: * Washington, May 12-13. Sec., Commission on Licensure, Dr. George C. Ruhland, 203 District Bldg., Washington.

FLORIDA:* Jacksonville, June 23-24. Sec., Dr. William M. Rowlett, Box 786, Tampa.

GEORGIA: Atlanta, June. Sec., State Examining Boards, Mr. R. C. Coleman, 111 State Capitol, Atlanta.

HAWAII: Honolulu, July 14-17. Sec., Dr. James A. Morgan, 48 Young Bldg., Honolulu.

INDIANA: Indianapolis, June 17-19. Sec., Board of Medical Registration and Examination, Dr. J. W. Bowers, Citizens Trust Bldg., Fort Wayne.

KANSAS: Kansas City, June 17-18. Sec., Board of Medical Registration and Examination, Dr. J. F. Hassig, 905 N. 7th St., Kansas City.

KENTUCKY: Louisville, June 5-7. Sec., State Board of Health, Dr. A. T. McCormack, 620 S. Third St., Louisville.

MARYLAND: *Medical*, Baltimore, June 17-20. Sec., Dr. John T. O'Mara, 1215 Cathedral St., Baltimore. *Homeopathic*, Baltimore, June 17-18. Sec., Dr. John A. Evans, 612 W. 40th St., Baltimore.

MICHIGAN: * Ann Arbor and Detroit, June 11-13. Sec., Board of Registration in Medicine, Dr. J. Earl McIntyre, 202-4 Hollister Bldg., Lansing.

MINNESOTA: * Minneapolis, April 15-17. Sec., Dr. Julian F. Du Bois, 350 St. Peter St., St. Paul.

MISSISSIPPI: Jackson, June. Asst. Sec., State Board of Health, Dr. R. N. Whitfield, Jackson.

NEBRASKA:* Omaha, June 12. *All applications must be on file not later than May 29.* Dir., Mrs. Jeanette Crawford, 1009 State Capitol Bldg., Lincoln.

NEVADA: Carson City, May 5. Sec., Dr. Fred M. Anderson, 215 N. Carson St., Carson City.

NEW JERSEY: Trenton, June 17-18. Sec., Dr. Earl S. Hallinger, 28 W. State St., Trenton.

NEW MEXICO: Santa Fe, April 14-15. Sec., Dr. Le Grand Ward, 135 Sena Plaza, Santa Fe.

NEW YORK: Albany, Buffalo, New York and Syracuse, June 23-26. Chief, Bureau of Professional Examinations, 315 Education Bldg., Albany.

NORTH CAROLINA: Raleigh, June 16-20. Sec., Dr. W. D. James, Hamlet.

NORTH DAKOTA: Grand Forks, July 1-4. Sec., Dr. G. M. Williamson, 4½ S. Third St., Grand Forks.

OKLAHOMA:* Oklahoma City, June 11-12. Sec., Dr. James D. Osborn Jr., Frederick.

PENNSYLVANIA: Philadelphia and Pittsburgh, July. Act. Sec., Bureau of Professional Licensing, Department of Public Instruction, Mrs. Marguerite G. Steiner, 358 Education Bldg., Harrisburg.

SOUTH DAKOTA:* Pierre, July 15-16. Dir., Medical Licensure, Dr. J. F. D. Cook, State Board of Health, Pierre.

VERMONT: Burlington, June 17-19. Sec., Dr. F. J. Lawliss, Richford.

VIRGINIA: Richmond, June 17-20. Sec., Dr. J. W. Preston, 3015 Franklin Road, Roanoke.

WISCONSIN:* Milwaukee, June 24-27. Sec., Dr. H. W. Shutter, 425 E. Wisconsin Ave., Milwaukee.

WYOMING: Cheyenne, June 2-3. Sec., Dr. M. C. Keith, Capitol Bldg., Cheyenne.

* Basic Science Certificate required.

BOARDS OF EXAMINERS IN THE BASIC SCIENCES

ARKANSAS: Little Rock, May 19. Sec., Mr. Louis E. Gebauer, 701 Main St., Little Rock.

CONNECTICUT: June 14. Address State Board of Healing Arts, 1945 Yale Station, New Haven.

DISTRICT OF COLUMBIA: Washington, April 21-22. Sec., Commission on Licensure, Dr. George C. Ruhland, 203 District Bldg., Washington.

FLORIDA: De Land, June 7. *Applications must be on file not later than May 24.* Sec., Prof. J. F. Conn, John B. Stetson University, De Land.

NEBRASKA: Omaha, May 6-7. Dir., Mrs. Jeanette Crawford, 1009 State Capitol Bldg., Lincoln.

OKLAHOMA: Oklahoma City, May 22. Sec. of State, Hon. C. C. Childress, State Capitol, Oklahoma City.

OREGON: Corvallis, July 12. Sec., State Board of Higher Education, Mr. Charles D. Byrne, University of Oregon, Eugene.

SOUTH DAKOTA: June. Sec., Dr. G. M. Evans, Yankton.

New York Endorsement Report

Mr. Herbert J. Hamilton, Chief, Bureau of Professional Examinations, reports 107 physicians licensed to practice medicine by endorsement from July 1 through Oct. 15, 1940. The following schools were represented:

School	LICENSED BY ENDORSEMENT Year Grad.	Endorsement of
College of Medical Evangelists	(1940)	N. B. M. Ex.
University of California Medical School	(1927)	California
University of Colorado School of Medicine	(1938)	N. B. M. Ex.
Yale University School of Medicine	(1935), (1937), (1938)	N. B. M. Ex.
Georgetown Univ. School of Med.	(1936), (1938, 2), (1939, 3)	N. B. M. Ex.
Howard University College of Medicine	(1932)	Kansas
Emory Univ. School of Medicine	(1933) Georgia, (1938)	N. B. M. Ex.
Loyola University School of Medicine	(1938)	N. B. M. Ex.
Northwestern University Medical School	(1935)	Illinois
Tulane University of Louisiana School of Medicine	(1919)	Louisiana, (1933) N. B. M. Ex.
Johns Hopkins Univ. School of Medicine	(1936), (1937, 2)	Maryland
University of Maryland School of Medicine and College of Physicians and Surgeons	(1936)	Maryland
Boston University School of Medicine	(1934)	N. B. M. Ex.
Harvard Medical School	(1935)	Maryland, (1935), (1936, 2), (1937, 2), (1938) N. B. M. Ex.
Tufts College Medical School	(1938), (1939, 2)	N. B. M. Ex.
St. Louis University School of Medicine	(1936)	Penna., (1938) Tennessee, (1939) N. B. M. Ex.
University of Nebraska College of Medicine	(1937)	Nebraska
Albany Medical College	(1938)	N. B. M. Ex.
Cornell University Medical College	(1934), (1939, 2)	N. B. M. Ex.
Long Island College of Med.	(1936), (1937), (1938), (1939)	N. B. M. Ex.
New York Medical College, Flower and Fifth Avenue Hospitals	(1938, 8), (1939, 2)	N. B. M. Ex.
New York University College of Medicine	(1937, 2), (1938, 3), (1939)	N. B. M. Ex.
Syracuse University College of Medicine	(1935), (1938)	N. B. M. Ex.
Univ. of Buffalo School of Med.	(1933), (1938, 2), (1939, 11)	N. B. M. Ex.
Univ. of Rochester School of Medicine and Dentistry	(1931)	N. B. M. Ex.
Duke University School of Medicine	(1936, 2), (1938)	N. B. M. Ex.
Western Reserve University School of Medicine	(1934), (1937), (1938)	Ohio
Jefferson Medical College of Philadelphia	(1936)	New Jersey, (1938) Pennsylvania
Temple University School of Medicine	(1936), (1937)	Penna.
University of Pennsylvania School of Medicine	(1932)	Penna.
Woman's Medical College of Pennsylvania	(1936), (1939)	N. B. M. Ex.
University of the South Medical Department	(1908)	Tennessee
Baylor University College of Medicine	(1933)	Texas
University of Vermont College of Medicine	(1932), (1935), (1939)	Vermont, N. B. M. Ex.
Marquette University School of Medicine	(1939)	N. B. M. Ex.
University of Wisconsin Medical School	(1933)	Penna.
University of Toronto Faculty of Medicine	(1938)	N. B. M. Ex.
McGill University Faculty of Medicine	(1923)	Kansas, (1937), (1939, 2) N. B. M. Ex.
Deutsche Universität Medizinische Fakultät, Prag	(1920)	N. B. M. Ex.
University of Edinburgh Faculty of Medicine	(1933)	N. B. M. Ex.

Maryland December Report

Dr. John T. O'Mara, secretary, Board of Medical Examiners of Maryland, reports the written examination for medical licensure held at Baltimore, Dec. 10-13, 1940. The examination covered 9 subjects and included 90 questions. An average of 75 per cent was required to pass. Forty-two candidates were examined, 28 of whom passed and 14 failed. The following schools were represented:

School	PASSED Year Grad.	Per Cent
Georgetown University School of Medicine	(1940)	85.4
Howard University College of Medicine	(1938)	87
Rush Medical College	(1937)	87.3
Johns Hopkins University School of Medicine	(1939)	83, (1940) 79.2, 79.3, 87.2
University of Maryland School of Medicine and College of Physicians and Surgeons	(1939) 84.1, 84.3, (1940)	85.2
Tufts College Medical School	(1939)	83
Jefferson Medical College of Philadelphia	(1940)	84
Temple University School of Medicine	(1940)	76.4, 81.2
University of Pennsylvania School of Medicine	(1939)	91.2
Marquette University School of Medicine	(1940)	80.5
Medizinische Fakultät der Universität Wien	(1920) (1922) 75.3, (1928) 76.3, (1932) 83	80,
Albert-Ludwigs-Universität Medizinische Fakultät, Freiburg	(1927)	80.3
Eberhard-Karls-Universität Medizinische Fakultät, Tübingen	(1922)	81.4
Ludwig-Maximilians-Universität Medizinische Fakultät, München	(1902)	82.1
Schlesische Friedrich-Wilhelms-Universität Medizinische Fakultät, Breslau	(1932)	76.1
Magyar Királyi Pazmány Petrus Tudományegyetem Orvosi Fakultasa, Budapest	(1924)	85.4
Regia Università degli Studi di Roma, Facoltà di Medicina e Chirurgia	(1935)	76.2, 83.2
American University of Beirut School of Medicine	(1935)	88.1

School	FAILED Year Grad.	Number Failed
University of Maryland School of Medicine and College of Physicians and Surgeons	(1940)	1
Hahnemann Med. College and Hospital of Philadelphia	(1939)	1
Karl-Ferdinands-Universität Medizinische Fakultät, Graz	(1922)	1
Medizinische Fakultät der Universität Wien	(1922)	1
Friedrich-Wilhelms-Universität Medizinische Fakultät, Berlin	(1915), (1919)	2
Ludwig-Maximilians-Universität Medizinische Fakultät, München	(1906)	1
Universität Heidelberg Medizinische Fakultat	(1912)	1
Magyar Királyi Pazmány Petrus Tudományegyetem Orvosi Fakultasa, Budapest	(1930)	1

Regia Università degli Studi di Napoli Facoltà di Medicina e Chirurgia	(1923), (1934)	2
Regia Università degli Studi di Siena. Facoltà di Medicina e Chirurgia	(1936)	1
Universität Basel Medizinische Fakultät	(1936)	1
Second Leningrad Medical Institute	(1926)	1

Eight physicians were licensed to practice medicine by reciprocity and 8 physicians so licensed by endorsement from August 2 through December 27. The following schools were represented:

School	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
University of Colorado School of Medicine		(1934)	New York
State University of Iowa College of Medicine		(1936)	Iowa
University of Michigan Medical School		(1929), (1936)	Michigan
Jefferson Medical College of Philadelphia		(1915)	Penna.
Temple Univ. School of Medicine	(1936)	New Jersey, (1938)	N. Carolina
University of Texas School of Medicine		(1931)	Texas

School	LICENSED BY ENDORSEMENT	Year Grad.	Endorsement of
College of Medical Evangelists		(1940, 4)	N. B. M. Ex.
Georgetown University School of Medicine		(1938)	N. B. M. Ex.
Duke University School of Medicine		(1937), (1938)	N. B. M. Ex.
Western Reserve University School of Medicine		(1936)	N. B. M. Ex.

Miscellany

THE STATUS OF DRUGLESS HEALERS IN THE UNITED STATES

JOHN R. NEAL, M.D.
CHICAGO

With the world aflame with the spirit of war it may seem of little moment and of minor concern to discuss such a prosaic subject as the status of drugless healers in the United States. Past experience, however, suggests that it is during times when international affairs absorb public interest and thought or in times of national stress when public attention is focused on large specific problems of economics or on general governmental matters that successful efforts are frequently made to break down the legal and other conventional barriers which protect a civilized society from ill conceived and unpractical reforms.

That drugless healers recognize the psychologic advantages of seeking favor in times of general stress or in periods of governmental transition and are alert to put forward energetic efforts to gain ground under such circumstances was well illustrated in Illinois recently. On the death of the governor, the lieutenant governor came into power for one hundred days. Factional dissension in the party represented by the administration set the stage for large scale political changes and intrigues during the brief tenure of the chief executive. The osteopaths recognized quickly the potential opportunity to gain advantage. This they attempted to seize by a well devised scheme to persuade the governor to dismiss the secretary of the medical examining board and replace him with a man whose sympathies were favorable to the osteopaths. Although the scheme miscarried, it demonstrated the ingenuity, the brilliant alertness and the boldness of osteopaths in seizing on every opportunity which offers the hope of gaining advantage in their behalf.

The legislature is now sitting in most of the states. Congress is in session. National defense and international affairs are subjects of overwhelming interest. Other matters are likely to be secondary in thought and in attention. The public, surely, is not likely to be aroused concerning the status of or proposed legislation relating to drugless healers or to the standards of medical practice. Members of the several legislatures are likely to fall in with the general prevailing spirit. The astute representatives of the drugless healers are not likely to close their eyes to the situation. Strong efforts along well planned lines will be made undoubtedly to gain advantages wherever these potential opportunities arise.

There is no uniformity in state laws relating to the drugless healers. As to osteopaths, they claim that they are discriminated against in only five states, Alabama, Illinois, Mississippi, Delaware and New Hampshire. Usually they mean by discrimination that they are not permitted privileges of practice equivalent for practical purposes to an M.D. One gains the impression from an examination of the laws, however, that privileges are assumed by the osteopaths in many instances, if their claims are accurate, rather than that the privileges are legally granted.

In three states, for example California, Texas and Wyoming, and in the District of Columbia, the medical practice laws either do not mention osteopathy or provide for licenses on the same basis as for an M.D. If osteopaths enjoy the full privileges of regularly licensed physicians in these states, presumably they are able to pass a regular medical examination or they obtain licenses through some kind of control over the licensing machinery.

In some twenty odd states the laws permit osteopaths generally to practice in accordance with the teachings in standard schools of osteopathy. A legal distinction is made between practice by an M.D. and that by an osteopath in these states but it is ill defined so that the osteopaths, according to claims set forth in their blue book, exercise broad privilege in the interpretation of the laws. One gains the impression that in these states they feel but little limitation in their practice.

In nine states, including Arizona, Florida, Georgia, Kentucky, Maine, Massachusetts, Minnesota and Montana, there seems to be but little difference between the privileges of practice of osteopaths and M.Ds. Some of these states specifically require, however, that osteopaths must pass a regular medical examination or a special examination in surgery in order to practice medicine legally in all its branches, and in some, as Michigan, the use of drugs by osteopaths is limited to narcotics and antiseptics for emergency only.

Several states, of which Kansas and Missouri are examples, permit by law the practice of osteopathy as taught and practiced by the standard schools of osteopathy but declare that this privilege is not the same as the practice of medicine in all its branches. The standard schools of osteopathy claim to teach and practice surgery generally. The supreme court in Kansas, however, has held that an osteopath may not practice operative surgery with surgical instruments or use drugs as remedial aids. In Missouri the law declares that

> The system, method or science of treating diseases of the human body, commonly known as osteopathy, and as taught and practiced by the American School of Osteopathy at Kirksville, Missouri, is hereby declared not to be the practice of medicine and surgery within the meaning of Article 1, of Chapter 53, and not subject to the provisions of said article.

The report of the Bureau of Legal Medicine and Legislation of the American Medical Association in discussing osteopathy in the United States in part says:

> Osteopaths may attempt to bolster up their claim to competency by pointing to the fact that in some states they may receive licenses comparable in scope to licenses issued to doctors of medicine. At the outset, it must be recognized that competency cannot be bestowed by legislative fiat. The fact, therefore, that osteopaths are by statute accorded, in a few states, privileges equal to those exercised by doctors of medicine contains no assurance of competency, for, so far as is known, no state legislature has ever seriously investigated the merits of osteopathy.

THE KIRKSVILLE COLLEGE

Two years ago the legislature of the state of Kansas ordered a committee to investigate the Kirksville College of Osteopathy and Surgery. The committee's report, dated Feb. 17, 1939, in part was as follows:

> 1. Concerning the ownership and control of the college, no information was furnished.
>
> 2. Concerning the financial resources of the college, no information was furnished.
>
> 3. Concerning the faculty, we were told by the Dean that there were about twenty-five full time salaried teachers and about twenty-five other part time teachers.

President's address, read before the Federation of State Medical Boards of the United States at the Thirty-Seventh Annual Congress on Medical Education and Licensure, Chicago, Feb. 17, 1941.

However, the annual catalogue for 1938-1939 under the heading "Faculty of the College" lists twenty-eight persons, of whom two have no teaching assignments. The schedule of classes for the spring semester 1939 also includes the names of twenty-one teachers. It therefore seems reasonable to conclude that other faculty members play no significant role in the program of instruction.

Of the preclinical sciences there are five which are taught at Kirksville and also in all recognized medical schools. These five subjects are anatomy, bacteriology, biochemistry, physiology and pathology. According to the catalogue and the current schedule, there are seven members of the faculty responsible for the teaching of these five subjects. Using the catalogue figures for student enrolment in the freshman and sophomore years, it is found that the ratio of teachers to students in these five departments is one to seventy-five. At the University of Kansas the corresponding ratio is one to four and two tenths and at the University of Illinois one to three and eight tenths. Although it would have been very desirable to discuss the work of each department with the instructor in charge, no members of the faculty were available for such conferences at the time of our visit.

4. The lack of numbers is no more significant than the lack of training of the faculty. Of the seven engaged in teaching the preclinical subjects mentioned above, no one has had the kind of training which would be required in any reputable medical school. Generally speaking, men are not promoted to the rank of assistant professor until after they have had five years of specialized scientific training under a recognized leader after obtaining their M.D. or Ph.D. degree. For a professorship, the customary standard is five years more, or ten years in all.

5. Neither medicine, osteopathy nor any other form of healing can be learned without continuous observation of the sick. The adequacy therefore of clinical facilities constitutes one of the most important criteria for measuring the efficacy of any teaching program having to do with the diagnosis and treatment of disease.

The Kirksville school maintains a hospital which is said to contain sixty beds. The Laughlin Hospital, across the street, is a private institution and cannot be counted as a part of the teaching resources of the school.

The student enrolment in the junior and senior years at Kirksville is approximately three hundred, so that the number of hospital patients available for purposes of instruction is approximately one fifth of a patient per student.

At the University of Kansas there are 700 patients under the control of the medical faculty and one hundred and forty students enrolled in the third and fourth years. For each student therefore there are 5 patients available for study, twenty-five times as many as are found at Kirksville.

6. At Kirksville it was stated that there were during the year one hundred and seventy deliveries, an average of one and two-tenths per cent per senior student.

At the University of Kansas eight hundred annual deliveries afford 11 cases per senior student.

7. According to the class schedule for the current semester, a very large part of the students' time is taken up with didactic instruction and a very small time devoted to laboratory work. This is contrary to the universally recognized principles of scientific instruction. For example, the lower freshman class has daily seven lecture periods scheduled at 8, 9, 10, 11, 1, 2 and 3 o'clock. It is customary to assume that each classroom hour demands two hours of preparation. Such a program, to say nothing of the laboratory exercises, is a manifest absurdity.

The various laboratories are entirely inadequate for the number of students which are enrolled. Of necessity the class is divided into as many as four or five sections compelling the instructors to repeat the same exercises day after day and preventing the students from devoting an adequate amount of time to experimental work. We saw no evidence of any investigative work being conducted by members of the faculty nor any place where such work could be carried on. We were told that there was no animal house and that no animals were kept by the school except the frogs which were used in the department of physiology; that when needed "a dog was brought in from the outside." It is impossible to conceive how pathology and bacteriology can be taught without the use of such animals as rabbits and guinea pigs.

The diagnostic laboratory in the clinic building was provided with means for simple routine examination of blood and urine. It was stated that there was no typing of pneumonia carried on and that all serological work was sent to the state laboratory.

Students do not supply themselves with microscopes. They are furnished by the school. Since we were told that the school owns one hundred and twenty-five microscopes, it is obvious that each student could not have one for his personal use. In the laboratory of pathology we were told that the microscopes were locked up in a closet and we were not able to see them. Apparently they are issued at the beginning of each laboratory exercise and then collected by the department to be used again for other sections of the class at other hours.

9. The library would accommodate apparently about sixty readers at one time. For a student body of nearly eight hundred this would seem to be wholly inadequate. Among the journals received and bound we observed less than half a dozen standard medical journals and none relating to the medical sciences. Most medical schools maintain files of from one hundred to two hundred medical and scientific journals.

THE LICENSING BOARDS

It would seem from these references and from the claims made by osteopaths that the status of these healers is determined to a large extent more through the processes of licensing than by any other particular factor. The laws in many states are vague and not susceptible of exact interpretation. Consequently the methods employed by and the character of licensing boards are the principal means of regulating osteopaths.

The osteopathic blue book of Illinois lists twenty-nine states in which examining boards for osteopaths are composed entirely of osteopaths, and they list fourteen other states in which one or more osteopaths are full fledged members of the medical examining boards. They regard the control of examining boards as tantamount to obtaining the privileges of practice which they seek.

The other drugless healers, particularly the chiropractors, have sat at the feet of the osteopaths for instruction in the ways and means of obtaining legal advantage. They employ similar tactics and are no less alert to opportunities. They recognize the importance of setting up independent examining boards or of gaining influence on the board of medical examiners. Their legislative efforts are planned on that basis. While they have not succeeded as well as osteopaths in this direction, their efforts are not likely to decline. If the standards of medical practice are to be maintained at a reasonably high level and if the public is to be protected from legally recognized drugless healers, these attempts at gaining legislative advantage must be expected and fought with intelligence and vigor.

The interest of the public in medicine and in health was never before so great as it is now. This interest is likely to grow in volume and intensity. Several important laws, extending the public health program, particularly the Social Security Act and the Venereal Disease Control Act, have been passed by Congress. Other measures proposing to provide systems of medical and hospital care are pending. Still other proposals are likely to be introduced.

Likewise in the various states there have been enacted various laws expanding public health programs. Medical care is provided to certain classes of patients, particularly the victims of tuberculosis, cancer and the venereal diseases, at government expense in many of the states. There will be efforts to extend services in the medical field far beyond those which now prevail.

This situation has come about because medicine has far more to offer than ever before. More medical knowledge of a practical, useful kind has been acquired in the last forty years than in all the centuries that went before. Almost daily some new drug or some new vaccine or some new medical procedure or some new discovery about viruses or bacteria is announced. To use this knowledge advantageously and in the best public interests requires the highest type of training and it requires a high level of professional integrity and skill. It requires, moreover, a humanitarian purpose.

For these reasons the legal control over the standards of medical practice and over the licensing of practitioners will become increasingly important. As appropriations for health protective services become larger and larger the temptation to all manner of alleged healers to find a place of advantage to themselves will grow greater and greater. They will be attracted to be channels through which the money flows as June bugs are attracted to electric lights at night. Already attempts have been made by the osteopaths to be made eligible for commissions in the medical departments of the army and navy.

Their approach is always through the legislature. First they seek merely to be recognized legally in any way at all. Then step by step they seek to obtain privileges which ultimately give them unlimited freedom in the practice of medicine.

The center of attack is invariably the registration system. They seek first to be recognized by the board of examiners, then to gain influence on it through direct representation and finally to establish boards made up entirely of their own choosing.

Since the members of boards of medical examiners are in a strategic position to observe the trends in medicine and in the various cult systems of healing, they might well assume the leadership in molding legislation in this field on a sound basis. Surely the law makers and the public alike need expert guidance in medical legislation, which profoundly affects the health and the life of people generally.

Bureau of Legal Medicine and Legislation

MEDICOLEGAL ABSTRACTS

Optometry Practice Acts: Right of Licensing Agency to Revoke License Without Court Order.—The California state board of optometry requested the district court of appeal, fourth district, California, to grant a rehearing on its prior decision which the board interpreted to lay down the rule that a license to practice optometry can be revoked only by an action in the courts and that a statewide licensing agency cannot revoke such a license until a court has ordered such revocation. The court pointed out that such an interpretation was incorrect and, to eliminate any misunderstanding, it restated the applicable law as follows: "If, after proceeding according to law, and after giving an accused licensee notice of a hearing and actually holding a hearing, a board having statewide authority issues its order revoking the license of a licensee, such order possesses finality unless the licensee seeks relief in the courts. If, however, the licensee seeks to have his license restored by appropriate action in mandamus in the courts, then the question must be litigated and a trial de novo must be had." The petition for rehearing was accordingly denied.—*Laisne v. California State Board of Optometry, 102 P. (2d) 538 (Calif., 1940).*

Society Proceedings

COMING MEETINGS

American Medical Association, Cleveland, June 2-6. Dr. Olin West, 535 North Dearborn St., Chicago, Secretary.

Alabama, Medical Association of the State of, Mobile, Apr. 15-17. Dr. D. L. Cannon, 519 Dexter Ave., Montgomery, Secretary.
American Academy of Physical Medicine, New York, Apr. 28-30. Dr. Herman A. Osgood, 144 Commonwealth Ave., Boston, Secretary.
American Association for the Study of Goiter, Boston, May 26-28. Dr. W. Blair Mosser, 133 Biddle St., Kane, Pa., Secretary.
American Association for the Surgery of Trauma, Montreal and Montebello, Canada, May 29-31. Dr. Ralph G. Carothers, 409 Broadway, Cincinnati, Secretary.
American Association of Genito-Urinary Surgeons, Hot Springs, Va., May 29-31. Dr. Charles C. Higgins, 2020 East 93d St., Cleveland, Secretary.
American Association of Industrial Physicians and Surgeons, Pittsburgh, May 5-9. Dr. Volney S. Cheney, % Armour and Company, Union Stock Yards, Chicago, Secretary.
American Association of Medical Milk Commissions, Cleveland, June 1-2. Dr. Paul B. Cassidy, 2037 Pine St., Philadelphia, Secretary.
American Association of the History of Medicine, Atlantic City, N. J., May 4-6. Dr. Henry E. Sigerist, 1900 East Monument St., Baltimore, Secretary.
American Broncho-Esophagological Association, Cleveland, June 3. Dr. Paul H. Holinger, 1150 North State St., Chicago, Secretary.
American College of Chest Physicians, Cleveland, June 1-2. Dr. Paul H. Holinger, 1150 North State St., Chicago, Secretary.
American College of Physicians, Boston, Apr. 21-25. Mr. E. R. Loveland, 4200 Pine St., Philadelphia, Executive Secretary.
American Gastro-Enterological Association, Atlantic City, N. J., May 5-6. Dr. Thomas T. Mackie, 16 East 90th St., New York, Secretary.
American Gynecological Society, Colorado Springs, May 26-28. Dr. Richard W. TeLinde, Johns Hopkins Hospital, Baltimore, Secretary.
American Heart Association, Cleveland, May 30-31. Dr. Howard B. Sprague, 50 West 50th Street, New York, Secretary.
American Laryngological Association, Atlantic City, May 28-30. Dr. Charles J. Imperatori, 108 East 38th St., New York, Secretary.
American Medical Women's Association, Cleveland, June 1-3. Dr. Etta Gray, 649 South Olive St., Los Angeles, Secretary.
American Ophthalmological Society, Hot Springs, Va., May 29-June 1. Dr. Eugene M. Blake, 303 Whitney Ave., New Haven, Conn., Secretary.
American Otological Society, Atlantic City, N. J., May 26-28. Dr. Isidore Friesner, 36 East 73d St., New York, Secretary.
American Physiological Society, Chicago, Apr. 16-19. Dr. Philip Bard, 710 North Washington St., Baltimore, Secretary.
American Proctologic Society, Cleveland, June 1-3. Dr. William H. Daniel, 1930 Wilshire Blvd., Los Angeles, Secretary.
American Psychiatric Association, Richmond, Va., May 5-9. Dr. Arthur H. Ruggles, 305 Blackstone Blvd., Providence, R. I., Secretary.
American Radium Society, Cleveland, June 2-3. Dr. William E. Costolow, 1407 South Hope St., Los Angeles, Secretary.
American Rheumatism Association, Cleveland, June 2. Dr. Loring T. Swaim, 372 Marlborough St., Boston, Secretary.
American Society for Clinical Investigation, Atlantic City, N. J., May 5. Dr. Eugene M. Landis, University of Virginia Hospital, Charlottesville, Va., Secretary.
American Society for Experimental Pathology, Chicago, Apr. 15-18. Dr. Harry P. Smith, Dept. of Pathology, University of Iowa, Iowa City, Secretary.
American Society for Pharmacology and Experimental Therapeutics, Chicago, Apr. 15-19. Dr. G. Philip Grabfield, 319 Longwood Ave., Boston, Secretary.
American Society for the Study of Allergy, Cleveland, June 2-3. Dr. J. Harvey Black, 1403 Medical Arts Bldg., Dallas, Tex., Secretary.
American Society of Biological Chemists, Chicago, Apr. 15-19. Dr. C. G. King, Dept. of Chemistry, University of Pittsburgh, Pittsburgh, Secretary.
American Society of Clinical Pathologists, Cleveland, May 30-June 1. Dr. A. S. Giordano, 531 North Main St., South Bend, Ind., Secretary.
American Surgical Association, White Sulphur Springs, W. Va., Apr. 28-30. Dr. Charles G. Mixter, 319 Longwood Ave., Boston, Secretary.
American Therapeutic Society, Cleveland, May 30-31. Dr. Oscar B. Hunter, 1835 Eye St. N.W., Washington, D. C., Secretary.
American Urological Association, Colorado Springs, Colo., May 19-22. Dr. Clyde L. Deming, 789 Howard Ave., New Haven, Conn., Secretary.
Arizona State Medical Association, Phoenix, Apr. 16-19. Dr. W. Warner Watkins, 15 East Monroe St., Phoenix, Secretary.
Arkansas Medical Society, Little Rock, Apr. 14-16. Dr. William R. Brooksher, 402 Garrison Ave., Fort Smith, Secretary.
Association for Research in Ophthalmology, Cleveland, June 3. Dr. Conrad Berens, 35 East 70th Street, New York, Secretary.
Association for the Study of Internal Secretions, Atlantic City, N. J., May 2-3. Dr. E. Kost Shelton, 921 Westwood Blvd., Los Angeles, Secretary.
Association of American Physicians, Atlantic City, N. J., May 6-7. Dr. Hugh J. Morgan, Vanderbilt University Hospital, Nashville, Tenn., Secretary.
California Medical Association, Del Monte, May 5-8. Dr. George H. Kress, 450 Sutter St., San Francisco, Secretary.
Conference of State and Provincial Health Authorities of North America, Washington, D. C., Apr. 28-May 2. Dr. A. J. Chesley, State Office Bldg., St. Paul, Secretary.
Connecticut State Medical Society, Bridgeport, May 21-22. Dr. Creighton Barker, 258 Church St., New Haven, Secretary.
Federation of American Societies for Experimental Biology, Chicago, Apr. 15-19. Dr. D. R. Hooker, 19 West Chase St., Baltimore, Secretary.
Florida Medical Association, Jacksonville, Apr. 28-30. Dr. Shaler Richardson, P. O. Box 1018, Jacksonville, Secretary.
Georgia, Medical Association of, Macon, May 13-16. Dr. Edgar D. Shanks, 478 Peachtree St., N.E., Atlanta, Secretary.
Illinois State Medical Society, Chicago, May 20-23. Dr. Harold M. Camp, 224 South Main St., Monmouth, Secretary.
Iowa State Medical Society, Davenport, May 14-16. Dr. R. L. Parker, 3310 Sixth Ave., Des Moines, Secretary.
Kansas Medical Society, Topeka, May 13-15. Mr. C. G. Munns, 112 West Sixth St., Topeka, Executive Secretary.
Louisiana State Medical Society, Shreveport, Apr. 21-23. Dr. P. T. Talbot, 1430 Tulane Ave., New Orleans, Secretary.
Maryland, Medical and Chirurgical Faculty of, Baltimore, Apr. 22-23. Dr. Richard T. Shackelford, 1211 Cathedral St., Baltimore, Secretary.
Massachusetts Medical Society, Boston, May 21-22. Dr. Robert N. Nye, 8 Fenway, Boston, Secretary.
Medical Library Association, Ann Arbor, Mich., May 29-31. Miss Anna C. Holt, 25 Shattuck St., Boston, Secretary.
Minnesota State Medical Association, St. Paul, May 26-28. Dr. B. B. Souster, 493 Lowry Medical Arts Bldg., St. Paul, Secretary.
Mississippi State Medical Association, Biloxi, May 13-15. Dr. T. M. Dye, Box 295, Clarksdale, Secretary.
Missouri State Medical Association, St. Louis, Apr. 28-30. Mr. E. H. Bartelsmeyer, 634 North Grand Blvd., St. Louis, Executive Secretary.
National Gastroenterological Association, New York, May 13-16. Dr. G. Randolph Manning, Room 319, 1819 Broadway, New York, Secretary.
National Tuberculosis Association, San Antonio, Tex., May 5-8. Dr. Charles J. Hatfield, 1790 Broadway, New York, Secretary.
Nebraska State Medical Association, Lincoln, May 5-8. Dr. R. B. Adams, 416 Federal Securities Bldg., Lincoln, Secretary.
New Hampshire Medical Society, Manchester, May 13-14. Dr. Carleton R. Metcalf, 5 South State St., Concord, Secretary.
New Jersey, Medical Society of, Atlantic City, May 20-22. Dr. Alfred Stahl, 55 Park, Newark, Secretary.
New York, Medical Society of the State of, Buffalo, Apr. 28-May 1. Dr. Peter Irving, 292 Madison Ave., New York, Secretary.
New York State Association of Public Health Laboratories, Syracuse, May 19. Miss Mary B. Kirkbride, New Scotland Ave., Albany, Secretary.
North Carolina, Medical Society of the State of, Pinehurst, May 19-21. Dr. I. H. Manning, Chapel Hill, Secretary.
North Dakota State Medical Association, Grand Forks, May 19-21. Dr. L. W. Larson, 221 Fifth St., Bismarck, Secretary.
Ohio State Medical Association, Cleveland, June 3. Mr. C. S. Nelson, 79 East State St., Columbus, Executive Secretary.
Oklahoma State Medical Association, Oklahoma City, May 19-22. Dr. L. S. Willour, 210 Plaza Court Bldg., Oklahoma City, Secretary.
Pacific Coast Oto-Ophthalmological Society, Los Angeles, May 26-29. Dr. C. Allen Dickey, 450 Sutter Street, San Francisco, Secretary.
Philippine Medical Association, Manila, Apr. 22-26. Dr. Candido M. Africa, 547 Herran St., Manila, Secretary.
Rhode Island Medical Society, Providence, May 28-29. Dr. Guy W. Wells, 124 Waterman St., Providence, Secretary.
Society for the Study of Asthma and Allied Condition, Atlantic City, N. J., May 3. Dr. W. C. Spain, 116 East 53d St., New York, Secretary.
South Carolina Medical Association, Greenville, Apr. 15-17. Dr. Julian P. Price, 105 West Cheves St., Florence, Secretary.
South Dakota State Medical Association, Mitchell, May 18-20. Dr. Clarence E. Sherwood, 107½ Egan Ave., Madison, Secretary.
Texas, State Medical Association of, Fort Worth, May 12-15. Dr. Holman Taylor, 1404 West El Paso St., Fort Worth, Secretary.
West Virginia State Medical Association, Charleston, May 12-14. Mr. Joe W. Savage, Public Library Bldg., Charleston, Executive Secretary.

Current Medical Literature

AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in continental United States and Canada for a period of three days. Three journals may be borrowed at a time. Periodicals are available from 1931 to date. Requests for issues of earlier date cannot be filled. Requests should be accompanied by stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested). Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

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Behavior of Blood Sedimentation Rate During and After Fever Therapy. F. Fetter and T. G. Schnabel, Philadelphia.—p. 115.

Familial Microcytic Anemia.—The discovery of an unusual blood picture in an Italian woman led Strauss and his co-workers to study 20 other members of her family, with the result that 5 more were found to have a similar disorder. Data obtained from hospital records indicated that 4 deceased members of the family had been anemic; none of them died as a result of the anemia. The erythrocytes of each of the affected persons number more than 5,000,000 per cubic millimeter with a hemoglobin level of from 9.36 to 10.92 Gm. per hundred cubic centimeters, a mean corpuscular volume of from 56.6 to 66.9 cubic microns and hemolysis complete only in 0.15 per cent saline solution. The icteric indexes, urobilinogen excretion, leukocytes and differential percentages were normal, and the platelets were either normal or increased. Roentgenograms of the skull of the 6 individuals showed a granular appearance. No other osseous changes were observed. The distribution of the 6 cases of this disorder among the 21 members shows that only affected members transmitted it. This points to a mendelian dominant type of inheritance. Treatment over weeks or months with full therapeutic doses of iron by mouth and by injection with 20 mg. daily of copper sulfate, liver extract by injection, raw liver by mouth, 2 grains (0.13 Gm.) of thyroid and high vitamin regimens was uniformly ineffective in altering the blood picture. The only symptoms suffered were those consistent with the relatively mild anemia present. Physical examinations were essentially normal. In no instance was splenomegaly present. The disorder described resembles simple hypochromic anemia and, to a lesser extent, erythroblastic anemia (Cooley).

Subacute Bacterial Endocarditis.—Christian finds that, of 150 consecutive adults with subacute Streptococcus viridans endocarditis admitted to the Peter Bent Brigham Hospital between April 1913 and September 1939, 134, or 89.33 per cent, had rheumatic heart disease. Only 1 patient had uncomplicated syphilitic aortic disease, while 3 had syphilitic aortic disease in addition to rheumatic lesions. This is further evidence of the predilection of Streptococcus viridans to form vegetations on the valves with rheumatic valvulitis. Eight of the remaining 16 patients were diagnosed as having a congenital heart defect (5 with either patent ductus arteriosus or interventricular septum defect and 3 with a congenital anomaly of the aortic cusps) and 8 who had no signs justifying a diagnosis of valvular heart disease and no past history of rheumatic fever or chorea; presumably these were nonrheumatic. In addition to the 150, there were 7 patients with a similar picture of subacute endocarditis, 4 due to Staphylococcus albus, 2 to unidentified staphylococci and 1 to a pleomorphic bacillus. In 6 of these the background was rheumatic heart disease and in 1 congenital subaortic stenosis. There were 17 other patients whose history, physical signs, temperature curve and progress of the disease were analogous to the 150 patients but in whom cultural methods failed to demonstrate bacteria. The development of their endocardiac disease on a background of rheumatic heart disease was applicable. If these 17 patients are added as cases of subacute bacterial endocarditis in a bacteria-free stage when studied, together with the 7 caused by other bacteria, a total of 174 cases of subacute bacterial endocarditis is reached, in which 157 (90.24 per cent) had a determinative background of rheumatic heart disease. Absence of auricular fibrillation is a definite feature of the background of subacute bacterial endocarditis. Only 4 (2.66 per cent) of the 150 patients with subacute Streptococcus viridans endocarditis had auricular fibrillation; 3 had persisting auricular fibrillation with mitral stenosis and aortic insufficiency of long duration and 1 with a history of rheumatic fever thirty-one years before had transient auricular fibrillation in the last few weeks of life. The absence of prior cardiac decompensation of more than slight degree was also characteristic. In only 22 of the 150 patients was shortness of breath observed before the symptoms of endocarditis appeared. Ten of these had experienced congestive heart failure of a sufficient degree to handicap their activities considerably, only an occasional patient had suffered prior congestive failure severe enough to require prolonged bed rest. It would seem that after marked congestive failure develops in a patient with rheumatic heart disease there is little probability of subacute bacterial endocarditis appearing. For some unknown reason heart valves which show chronic valvulitis or scarring do not seem vulnerable to Streptococcus viridans and other bacteria of similar pathogenicity after the more advanced clinical stages of chronic heart disease have been reached. Age seems to show a slight influence on the determinative background. Subacute Streptococcus viridans endocarditis occurred most frequently among

patients between 20 and 29 years of age. The sex preponderance was 92 (61.33 per cent) males against 58 females (38.66 per cent).

Anesthesiology, New York

3:1-120 (Jan.) 1941

Experimental Studies on Carbon Dioxide Absorbers for Anesthesia. J. Adriani and E. A. Rovenstine, New York.—p. 1.
Clinical and Experimental Studies on Paraldehyde. M. Bodansky, J. L. Jinkins, H. Levine and A. J. Gilbert, Galveston, Texas.—p. 20.
Endotracheal Anesthesia: Relation of Nasotracheal and Orotracheal Intubation to Respiratory Morbidity. N. A. Gillespie and W. A. Conroy, Madison, Wis.—p. 28.
Toxicity of Hypnotics as Affected by Temperature, Thyroxine and Adrenalectomy. R. K. Richards, North Chicago, Ill.—p. 37.
Ether Anesthesia and Cerebral Anoxia: Study of Causative Factors in Serious Anesthetic and Postanesthetic Complications. C. B. Courville, Los Angeles.—p. 44.
Successful Treatment of Hysterical Paralysis with Pentothal Sodium and Psychotherapy. R. Somerfield and R. M. Tovell, Hartford, Conn.—p. 59.
Regional Anesthesia for Operations About Head and Neck. L. H. Mousel, Rochester, Minn.—p. 61.
Studies on Detoxication of Local Anesthetics: Protective Action of Intravenous Injections of Calicum Salts on Respiratory and Circulatory Effects of Pontocaine Hydrochloride. H. Wastl, with assistance of A. E. Pearce and A. A. Liberi, Philadelphia.—p. 74.
Influence of General Anesthetic Agents on Bacterial Flora of Upper Respiratory Tract. M. M. Schapiro and L. Arnold, Chicago.—p. 80.

Archives of Internal Medicine, Chicago

67:1-240 (Jan.) 1941

*Arterial Hypertension and Section of Splanchnic Nerves. D. A. Rytand and E. Holman, San Francisco.—p. 1.
*Staphylococcic Bacteremia: Treatment with Sulfapyridine and Sulfathiazole. W. W. Spink, A. E. Hansen and J. R. Paine, Minneapolis.—p. 25.
Enterorrhagia Complicating Lobar Pneumonia: Acute Pneumococcic Hemorrhagic Ulcerative Gastroenteritis, with Report of Case. J. P. McCrae, Boston.—p. 36.
Pleuropulmonary Tularemia. S. D. Blackford and C. J. Casey, University, Va.—p. 43.
Changes in Content of Carbon Dioxide in Venous Blood During Rebreathing Experiments: Comparison of Change in Persons with Normal Heart and in Patients with Cardiac Disease. H. Landt and J. E. Benjamin, Cincinnati.—p. 72.
Diagnosis of Site of Origin of Ventricular Extrasystoles in Human Beings. M. R. Castex, A. Battro and R. González S., Buenos Aires, Argentina.—p. 76.
Tumors of Heart: Report of Four Cases and Review of Literature. J. R. Lisa, L. Hirschhorn and C. A. Hart, New York.—p. 91.
Iodine and Cholesterol Metabolisms in Patients with Primary Myxedema: Clinical and Experimental Study with Report of Results of Treatment. A. M. Greene, Omaha.—p. 114.
Congenital Bicuspid Aortic Valves. S. Koletsky, Cleveland.—p. 129.
Acquired Bicuspid Aortic Valves. S. Koletsky, Cleveland.—p. 157.
*Hyperactive Cardioinhibitory Carotid Sinus Reflex: Possible Aid in Diagnosis of Coronary Disease. L. H. Sigler, Brooklyn.—p. 177.
Time-Activity Curves of Protamine Zinc Insulin: Clinical Application and Significance of Such Curves in Treatment of Patients with Severe Diabetes. Helen Eastman Martin and P. O. Greeley, Los Angeles.—p. 194.
Allergy: Review of Literature of 1940. F. M. Rackemann, Boston.—p. 207.

Arterial Hypertension and Section of Splanchnic Nerves.—In choosing patients with arterial hypertension for splanchnic nerve section Rytand and Holman disregarded age, congestive heart failure, angina pectoris, coronary occlusion, hemiplegia or glomerulonephritis. Forty patients were subjected to operation. The results were generally poor; 8 died within two weeks of the operation, 11 within a year and a half, 5 had their blood pressures reduced to some degree, 6 felt better with no reduction in their hypertension, 9 experienced no change and 1 obtained a brilliant result. As early as three months postoperatively the heart of this patient was reported as normal in size. A year after operation the patient married. She now (three and a half years after operation with a systolic pressure of 145 and a diastolic pressure of 85) complains of fatigue and dyspnea only if she works hard but feels better while taking 0.1 Gm. of digitalis daily. There is no edema. While the symptomatic improvement appeared at once, the main decline in arterial pressure did not occur until six months after operation. The average reduction of the arterial pressure of the 5 patients in whom it decreased was from 200 systolic and 120 diastolic to 155 and 100, respectively. Their ages ranged from 30 to 54 years (average 39 years). They were known to have been hypertensive for from two to ten years. None of these patients had any urinary abnormality or elevated blood urea concentration, and all but 1 had perfectly normal fundi. All had thickened radial arteries. One had survived an attack of coronary occlusion, and 2 presented themselves with congestive heart failure. Therefore age, duration of hypertension, vascular complications in the brain and heart, heart failure and lability of arterial pressure were not prognostically significant. The deciding prognostic factor seemed to be the presence or absence of malignant hypertension as evidenced by renal and retinal lesions.

Sulfapyridine and Sulfathiazole for Staphylococcic Bacteremia.—During the last three years, Spink and his colleagues encountered 100 patients with staphylococcic sepsis. Staphylococci were isolated from the blood of 50, and 25 of them had staphylococcemia. Sulfapyridine was given to 10 and sulfathiazole or both to 15. Four of the patients treated with sulfapyridine died. There was some variation in dosage, but the usual procedure was to administer orally 4 Gm. as an initial dose and then 1 Gm. every four hours. Essentially the same oral doses were employed for the 15 patients receiving sulfapyridine. Lower concentrations of the drug in the blood were obtained with sulfathiazole than with sulfapyridine. The blood was sterilized in all 15 patients, and they recovered from their acute infections. One patient died subsequently of complicating myelogenous leukemia. Four patients had also received sulfapyridine prior to sulfathiazole with no definite benefit; such was also the case of the 5 patients who were given sulfanilamide prior to the sulfathiazole. Sulfathiazole appears to be superior to sulfanilamide or sulfapyridine in staphylococcemia. Although sulfathiazole will sterilize the blood stream, viable organisms will persist in localized abscesses and metastatic lesions, and it is imperative that abscessed areas be adequately drained. The drug will not sterilize the contents of an abscess but will aid in preventing its spread to healthy tissue and the consequent dissemination of bacteria to the blood stream. When foci of infection persist, the patient must be kept under observation for a long period, as blood stream invasion may recur.

Hyperactive Cardioinhibitory Carotid Sinus Reflex.—Sigler has found that the hyperactive cardioinhibitory reflex of the abnormal carotid sinus group of responses usually appears before and often commences to subside at a time when the other reflexes reach their highest effects. It occurs with greater frequency and to higher degrees among men of advanced age and in the presence of demonstrable coronary disease. Believing that gradual compression of the carotid arteries against the spinous process at the level of the cricoid cartilage might be used as an aid in the diagnosis of coronary disease, the author studied the records of 1,886 additional patients on whom the test was performed. The series consisted of 1,151 males and 735 females from 10 to 85 years of age. The series was divided into four groups: (1) persons with various grades of demonstrable coronary sclerosis, with or without hypertension or other disease states, (2) persons with hypertension, with or without evidence of arteriosclerosis or other disease states but without coronary sclerosis, (3) persons with cardiac disease other than the arteriosclerotic type and (4) normal persons and persons presenting constitutional disease with no hypertension or demonstrable cardiac disease. A hyperactive cardioinhibitory carotid sinus reflex occurred with greater frequency in coronary disease than in any other condition. Compared with the normal group, the frequency was about 50 per cent greater; compared with persons with other disease states it is about 30 per cent. Among female patients the difference was smaller, perhaps because the incidence of coronary disease is also much smaller. The more advanced the disease, the greater was the incidence and the higher were the degrees of response. Heart disease other than the arteriosclerotic type also showed a slightly greater incidence and higher degree of response than the other conditions, even though such disease in the series occurred in young persons in whom normally the response is rare. The comparative frequency of the reflex among persons with conditions other than heart disease and even in normal persons eliminates heart disease as the cause of the condition. It appears that the reflex is due to lowered resistance at the synapses in the cardioinhibitory center and more so in the extracardiac and intracardiac ganglionic cells

and in the myoneural junctions. This allows voluminous transmission of afferent and efferent impulses. Coronary disease with its associated ischemia is a possible local cause for the lowering of resistance. Other causes may be an abnormal constitutional state and some defect in the nervous system. The hyperactive reflex is recommended as a possible aid in the diagnosis of such disease in persons of arteriosclerotic age who show suggestive signs or symptoms. Additional knowledge of the reflex may help to explain the various cardiac arrhythmias and sudden, heretofore unexplained, death.

California and Western Medicine, San Francisco

54:1-52 (Jan.) 1941

Changing Conception of Coronary Artery Disease. J. J. Sampson, San Francisco.—p. 6.
Fibroma of Nasopharynx. G. W. Walker and M. F. Stock, Fresno.—p. 10.
Coccidioidomycosis: Relative Values of Coccidioidin and Tuberculin Testing Among Children of the San Joaquin Valley. Juliet E. Thorner, Bakersfield.—p. 12.
Convulsive States: Their Differential Diagnosis and Management. L. W. Empey, Roseville.—p. 15.
Progress in Examination of Semen Relative to Fertility. L. Michelson, San Francisco.—p. 19.
Eczema of Infancy and Early Childhood: Its Pediatric Management. C. Bost, San Francisco.—p. 24.

Endocrinology, Los Angeles

23:1-144 (Jan.) 1941. **Partial Index**

Correlation of Physiologic and Cytologic Changes in Neurohypophysis of Rats with Experimental Diabetes Insipidus. I. Gersh and C. M. Brooks, Baltimore.—p. 6.
*Successful Responses in Diabetes Mellitus of Menopause Produced by Antagonistic Action of Sex Hormones on Pituitary Activity. E. Cantilo, Buenos Aires, Argentina.—p. 20.
Inheritance of Glucose Tolerance. Versa V. Cole, B. K. Harned and C. E. Keeler, Philadelphia.—p. 25.
Influence of Thyroid on Resorption of Gonadotropic Hormones. F. Bischoff, Georgena J. Clarke and C. H. Epps, Santa Barbara, Calif.—p. 48.
Inhibition of Mammary Growth by Large Amounts of Estrogen. W. U. Gardner, New Haven, Conn.—p. 53.
Question of Thyroid Weight During Pregnancy with Further Observations of Adrenal Weight in Late Pregnancy. W. F. Hewitt Jr. and E. J. Van Liere, Morgantown, W. Va.—p. 62.
Studies on Corpus Luteum Metabolism: I. Effects of Intermenstrual Administration of Testosterone Propionate. E. C. Hamblen, W. K. Cuyler and G. J. Axelson, Durham, N. C.—p. 70.
Id.: II. Effects of Intermenstrual Administration of Estrogens. E. C. Hamblen, W. K. Cuyler and G. J. Axelson, Durham, N. C.—p. 72.
Skeletal Changes in Rats Receiving Estradiol Benzoate as Indicated by Histologic Studies and Determinations of Bone Ash, Serum Calcium and Phosphatase. H. G. Day and R. H. Follis Jr., Baltimore.—p. 83.
Administration of Rat Thymus to Pregnant Rats and Lack of Effect in Successive Generations. M. W. Burrill and A. C. Ivy, Chicago.—p. 94.
Permanent After-Effects Following Masculinization of Infantile Female Rat. J. T. Bradbury, Ann Arbor, Mich.—p. 101.
Action of Testosterone Propionate on Experimental Menstruation in Monkey. P. A. Duncan, E. Allen and J. B. Hamilton, New Haven, Conn.—p. 107.
Quantitative Relations of Prostatic Component (Acid Phosphatase) of Human Seminal Fluid. A. B. Gutman and Ethel Benedict Gutman, New York.—p. 115.
Cutaneous Vascular and Pigmentary Changes in Castrate and Eunuchoid Men. E. A. Edwards, Boston; J. B. Hamilton, S. Q. Duntley and G. Hubert.—p. 119.
Frog Test (Xenopus Laevis) as Rapid Diagnostic Test for Early Pregnancy. A. I. Weisman and C. W. Coates, New York.—p. 141.

Diabetes Mellitus of Menopause and Sex Hormones.—Cantilo tried to inhibit the diabetogenic principle of the anterior pituitary in 40 women in menopause with diabetes mellitus by administering large doses of sex hormones. The diets of the patients were not restricted and they did not receive insulin. A constant improvement, as measured by the dextrose tolerance test, was observed in all patients who showed evidence of a disturbed hormone balance characterized by hyperpituitarism, which should be attributed to decreased gonad activity. The 100 per cent of successful responses, even of some severe cases of diabetes with glycosuria and ketonuria, emphasizes the necessity of separating climacteric diabetes characterized by a diminished carbohydrate tolerance, which does not differ from that of Cushing's disease. While the author's patients were on a regimen of insulin and restricted diets without any other endocrine therapy, the disturbed carbohydrate metabolism remained almost unchanged. Successful responses were obtained only with large doses of estrogen and progesterone. The condition of the patients after treatment was discontinued showed the remarkable effects of the therapy. The author does not wish to imply that his patients were genuinely cured. However, the marked inhibition exerted on pituitary activity by the sex hormones makes the therapy interesting.

Journal Industrial Hygiene & Toxicology, Baltimore

23:1-54 (Jan.) 1941

*Some Facts and Reflections on the Problem of Poisoning by Benzene and Its Homologues. E. Schwarz and L. Teleky, Chicago.—p. 1.
Absorption, Distribution and Elimination of Benzene by Body Tissues and Fluids of Dogs Exposed to Benzene Vapor. H. H. Schrenk, W. P. Yant, S. J. Pearce, F. A. Patty and R. R. Sayers, Pittsburgh.—p. 20.
Control of Tuberculosis: III. Management of the Employee with Pulmonary Tuberculosis. Ada Chree Reid, New York.—p. 35.
Acute Silicosis. W. D. McNally, Chicago.—p. 45.

Poisoning by Benzene and Its Homologues.—Schwarz and Teleky attempted to determine the significance of hemorrhages, of a leukocyte and erythrocyte decrease of 25 per cent and of a hemoglobin decrease to less than 70 per cent, as diagnostic signs of benzene poisoning. Analysis of blood from cases of benzene poisoning shows that the balance of destructive and regenerating processes determines the resulting blood picture and the state of the blood forming organs. A review of cases reported during the years 1930 through 1939 shows 156 serious ones; among these there were 67 deaths. The 156 cases do not include the many slight intoxications. The number of cases in the United States is increasing markedly. Toluene and xylene are more widely used today than in earlier years, often mixed with benzene. These homologues have a greater effect on the nervous system than benzene, but they also may rarely injure the blood forming tissues and cause death. The blood changes differ to some degree from those caused by benzene. Other substances (benzine, butyl alcohol and acetate, methyl alcohol) present in mixed solvents may (especially under certain circumstances when two or more substances act together) have an influence on the blood forming organs. As the combined effect of several harmful substances is not always the same as the total of their individual effects, an atypical clinical picture should be viewed as possibly caused by a mixture of different toxic solvents. Atypical cases seem more frequent in recent years, and especially in this country where the use of mixed solvents has greatly increased. To clarify the effect of the mixtures on blood formation exact determinations of all the air-contaminating substances, not only benzene, are necessary. The restriction of the use of benzene, its replacement by less dangerous (preferably innocuous) solvents is imperative in any industry in which the workers breathe the evaporated air. As long as benzene is used, medical supervision is indispensable and blood examinations must be made at least every month. When toluene and xylene are used, a blood examination every four or six months is sufficient.

Medical Annals of District of Columbia, Washington

10:1-38 (Jan.) 1941

Rheumatoid Arthritis: Present Status of Sulfur, Vitamin D, Bee Venom, Chaulmoogra Oil and Gold as Therapeutic Agents. D. C. Crain, Washington.—p. 1.
Acute Coronary Thrombosis. E. C. Andrus, Baltimore.—p. 11.
Heart Disease in Pregnancy. F. B. Carr, Worcester, Mass.—p. 16.
*Pyrethrum in Medicine. W. K. Angevine, Washington.—p. 21.
Surgical Treatment of Acute and Chronic Lung Abscess. E. Horgan, Washington.—p. 23.

Pyrethrum in Medicine.—Angevine states that a recent survey of prisoners revealed that nearly 7 per cent suffer from one or more forms of parasitic infestation, and probably more than 2 per cent from scabies. One of the orthodox methods of treating these conditions is by the application of mercurial or blue ointment, a violent poison to man, whose vermicidal action is slow and cumbersome. To a 6 per cent jelly-like oleoresin of pyrethrum the author added petrolatum to make a finished product containing 2 per cent pyrethrins. He called it A-200 compound. The ointment is nonpoisonous to man. Large oral doses to guinea pigs produced no toxic effects or changes in hemoglobin, urine and blood. Almost as soon as the A-200 compound was applied to prisoners infested, the lice would die within a few moments. Even when it was spread

lightly over infested areas the parasites which had burrowed into the skin would back out from their retreats and might be seen to make convulsive movements with paralysis. Pyrethrum is a central nervous toxin to cold-blooded animals, and death is preceded by paroxysms. Ova, which are usually extremely tenacious, immediately become detached from the hairs. The action is almost instantaneous and decisive. In more than 200 cases a single application was sufficient to delouse the patient, and this with no instance of contact dermatitis or cutaneous irritation due to the use of the compound. The success of the ointment for the treatment of phthiriasis suggested its use as a specific for scabies. The author treated 70 cases of scabies with the A-200 compound and found that scrubbing and bathing were not essential to successful treatment. Pustular conditions did not contraindicate its use. The most severe cases required no more than three applications; usually lesions were found to heal after a single treatment. There have been no recurrences, cases of dermatitis or cutaneous irritation. The rapid healing offers conclusive evidence that the mites had been destroyed completely, thus removing the source of irritation.

Michigan State Medical Society Journal, Muskegon

40:1-80 (Jan.) 1941

Medical Societies and Medical Progress. R. Cole, Mount Kisco, N. Y. —p. 19.
Sinusitis: Orbital Complications. W. H. Steffensen, Grand Rapids. —p. 30.
Industrial Hygiene: Responsibility of the Medical Profession. P. A. Neal and J. J. Bloomfield, Washington, D. C.—p. 32.
Carcinoma of Large Bowel: Problem of Early Diagnosis. J. B. Hartzell, Detroit.—p. 36.
Surgical Diseases of Colon: Diagnosis and Treatment. C. D. Brooks and L. B. Ashley, Detroit.—p. 43.

Public Health Reports, Washington, D. C.

56:41-88 (Jan. 10) 1941

Summary of Physical Findings on Men Drafted in the World War. R. H. Britten and G. St. J. Perrott.—p. 41.
Report of New Type of Pneumococcus Which Crosses with Types X, XI, XX, XXIX, and XXXI Antipneumococcus Serums. Alice L. Chinn and Bernice E. Eddy.—p. 62.

War Medicine, Chicago

1:1-142 (Jan.) 1941

Industrial Hygiene and the Navy in National Defense. E. W. Brown, New York.—p. 3.
*Amphetamine (Benzedrine) Sulfate: Review of Its Pharmacology. A. C. Ivy and L. R. Krasno, Chicago.—p. 15.
Aviation Medicine in the United States Navy. F. Ceres, Pensacola, Fla.—p. 43.
*March Fracture: Report of Three Cases. P. L. Moore and A. N. Bracher, Schofield Barracks, Hawaii.—p. 50.
Chemotherapy for Infectious Diseases and Other Infections. Circular Letter No. 81.—p. 55.

Amphetamine Sulfate.—Ivy and Krasno state that from 5 to 20 mg. of amphetamine sulfate will promote wakefulness in most normal subjects. Its use in narcolepsy is not curative, though it has been reported as such in mild cases. The drug's influence on mood is a subjective feeling of "augmented energy, relief from fatigue, mental stimulation, increased confidence, loquacity, general expansiveness, optimism and euphoria." On repeated administration the improvement diminishes and may disappear. After discontinuance for a period, its effect on mood returns. Its effect in diminishing fatigue is generally agreed to be due to an effect on the central nervous system and to be entirely subjective. Its use in normal persons to promote wakefulness and to elevate mood is not recommended. Its use to dispel sleepiness and fatigue in normal persons is not advisable, as it cannot replace needed rest and sleep and because objectionable side reactions (insomnia, anxiety, anorexia, nausea, palpitation and the like) and habit formation are possible. Any drug that produces euphoria is potentially habit forming. Amphetamine sulfate is not an exception. Neurotic persons craving euphoria and persons working under nervous strain are susceptible to habit formation, and withdrawal is objected to. The drug appears to help control the desire for alcohol in chronic alcoholism, provided the subject desires to be relieved of the addiction; otherwise one habit may be substituted for another. Repeated psychomotor tests indicate that the effects on fatigue of amphetamine sulfate and of caffeine are similar. Both drugs increase psychomotor activity rather than decrease sensitivity to fatigue. Performance was favored by the two drugs, except steadiness, which was diminished by caffeine. The effect of amphetamine sulfate on the physiologic processes has not been studied adequately. It has been used to abolish persistent hiccup. Doses of 20 mg. or more may cause a slight rise in body temperature and a decrease in cutaneous temperature. In doses of from 15 to 20 mg. it usually increases basal metabolism. The decrease in body weight of obese persons using the drug as an aid to adhere to a low calory diet has been attributed to increased activity and increased metabolic rate, and the anorexia to inhibition of gastric tone and elevation of mood. The effect on blood pressure of doses up to 20 mg. is variable for the individual subject; because of this the suggestion that high pressures tend to fall and low pressures tend to rise is of little therapeutic value. The pulse rate of most subjects is increased after a single dose. On repeated administration a decrease often appears. The report that 20 mg. of amphetamine sulfate increased cardiac output has not been confirmed by studies on 12 normal subjects. Ordinary therapeutic doses do not cause significant electrocardiographic changes. It has been reported that the drug reduces mental depression caused by a simulated altitude. Its effect under such conditions probably is due to an improvement of cerebral circulation. However, it may have a direct effect on the cerebral cells. The acid-base balance of the blood is not significantly changed by 10 or 20 mg. of amphetamine sulfate under normal or anoxic conditions. From 10 to 30 mg. of amphetamine sulfate delays the rate of evacuation of the stomach and gallbladder if given after a fatty meal. It has been claimed to be effective in some cases of colonic spasm. In man and animals the size of the spleen has been reduced. There is no agreement regarding its effect on urinary output. It is claimed that it acts synergistically on the bladder with atropine. Its use for enuresis and incontinence has given favorable results. The tone of the human uterus is reported to be increased and the amplitude of the contractions decreased. Its use for relief of dysmenorrhea has been favorably reported. Libido in man is reported to be increased occasionally by the drug. A 0.25 per cent solution of amphetamine sulfate is reported to be more effective than ephedrine as a mydriatic. Its use for sea sickness has been favorable. It is reported to be a valuable adjuvant to prostigmine bromide in myasthenia gravis, but of no value in congenital myotonia.

March Fracture.—Moore and Bracher stress the fact that march fracture may be seen in persons engaged in activities not connected with the military service. They report 3 cases, 2 of which followed athletic participation and 1 a night march. Meyerding and Pollock define march fracture as "a fracture of the second, third or fourth metatarsal bones without known adequate cause." The onset of symptoms is usually insidious, beginning with mild discomfort or burning in the foot. This was not the case with the authors' patients, who could ascribe their disability to a definite period of activity followed by sudden, almost disabling, pain. Edema on the dorsum of the foot begins approximately twelve hours after the onset of pain, and pain is especially intense when pressure is made over the involved bone. The patient walks with a noticeable limp. Erythema over the fracture site may be present. Roentgenograms taken soon after the symptoms developed demonstrated metatarsal fracture in 2 of the cases; in the third case a roentgenogram taken four days after the onset of symptoms showed a questionable fracture line, but ten days later a definite metatarsal fracture was visible. With the scanty history that the 3 men gave each might have been treated for an injury to ligaments, a contusion or metatarsalgia. The authors believe that the condition known as "pied forcé," or forced foot, is as reasonable an explanation of march fracture as they have yet seen offered. It is simply another term for fracture of a metatarsal bone as a result of the foot being impacted between two forces: the weight of the body and the ground. These forces are not usually thought of as external. Flat feet or other structural inadequacies may or may not be a predisposing factor. The 3 patients had normal arches.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

Archives of Disease in Childhood, London

15:201-278 (Dec.) 1940

*Gargoylism: Review of Principal Features: Report of Five Cases. J. L. Henderson.—p. 201.
*Report of Additional Case of Gargoylism. R. W. B. Ellis.—p. 215.
Proliferative Mural Bronchiolitis. S. Engel and G. H. Newns.—p. 219.
Gaucher's Disease: Diagnosis by Sternal Puncture and Improvement Following Splenectomy. J. N. M. Chalmers.—p. 230.
Nerve Cell Swelling of Juvenile Amaurotic Family Idiocy Type Associated with Tuberose Sclerosis in Infant Aged 12 Months. R. M. Norman.—p. 244.
Blood Cholesterol Content in Childhood. Vida J. M. Stark.—p. 255.

Gargoylism.—Henderson discusses 5 cases of gargoylism, a type of congenital chondro-osteodystrophy in which the deformities of the head, trunk and limbs are associated with mental defect, corneal clouding and hepatosplenomegaly. Records of 57 cases have been found in the literature, although satisfactory details are lacking in 9. A number of cases were probably missed owing to lack of a standardized nomenclature. Four of the 5 cases presented were under the care of John Thomson of Edinburgh. Some of the clinical features of the disease are the following: Growth is usually retarded from the first year. Dwarfing is always severe of the children who survive childhood. The cranium is nearly always enlarged and, unlike the face, which is grotesque, its conformation is variable. Scaphocephaly is the principal type, while brachycephaly is almost as common. Hydrocephalus is a frequent complication. Bony ridges along the suture lines and unduly prominent supraorbital ridges sometimes occur. Closure of the anterior fontanel is always delayed. The nasal bridge is flat and wide, and the nostrils are often turned forward. This usually leads to rhinitis. The mandible is frequently broad and heavy, and the teeth are widely spaced, irregular and poorly developed. Dentition commenced at the normal time in about half of the cases; in others it was delayed. The lips are usually thick, and the large tongue, often fissured, lies well forward, sometimes actually protruding, in a slightly open mouth. The cheeks are full and often ruddy. The ears usually appear to be unduly low set and occasionally enlarged. Coarse, dark eyebrows frequently add to the uncanny appearance, but the hair is usually fine and silky. The neck is usually short, the head appearing to be planted on the shoulders. The chest is seldom well formed, but not malformed as in Morquio's disease. Flaring of the costal margins and minor degrees of pigeon breast are frequent. Roentgenograms show considerable broadening of the ribs. Dorsolumbar kyphosis is seldom absent and is caused by a dysplasia of one or more of the upper lumbar vertebrae, which are notably small, with a flattened or wedge-shaped body frequently bearing an anterior hooklike process. The abdomen is usually enlarged, often grossly. Umbilical and inguinal hernia is common. The arms are relatively short, with impaired mobility of the joints with slight permanent semiflexion. The hands are broad, short and clawlike. Coxa valga, genu valgum and pes planus have been observed. Roentgenologically the bones of the extremities are thickened and roughly formed, the latter condition being most apparent in the joints. Carpal ossification is retarded. Amentia is a most characteristic feature. Corneal clouding is a salient feature, but it is not always present. The clouding is usually congenital and diffuse, giving the corneas a ground glass appearance, but it seldom involves the superficial layers. Hepatosplenomegaly occurs in the majority of cases and occasionally is extreme. The muscles are poorly developed and weak. Hypertrichosis is a common feature. Retarded sexual development was a feature of 4 of the 5 patients who lived past the age of puberty. It was still apparent at 23 in the twins described by Nonne. The 5 cases reported by the author were encountered in two families. The affected infants were much larger at birth than their healthy siblings. The most constant pathologic changes (from the few necropsies reported) are found in the osseous and nervous systems. The bones are thickened, and many of them display characteristic deformities. In the brain there are widespread degenerative changes in the nerve cells with intracellular and extracellular lipoid deposits. Lipoid deposits may occur in the corneas, liver, spleen and other tissues. The disease is recessively inherited with a high familial incidence. There have been five instances of consanguineous marriages. The available evidence supports the view of several writers that the disease should be grouped with the congenital disorders of lipoid metabolism. The relationship of the chondro-osteodystrophy to the other morbid features is obscure.

Case of Gargoylism.—As an addendum to Henderson's discussion, Ellis cites a case which illustrates a number of the clinical and roentgen features of the condition. The changes were not as definite as in many of the reports that have been published. The patient showed the following characteristic features of gargoylism: the peculiar facies, hepatosplenomegaly, chondro-osteodystrophy giving rise to flexion deformities (particularly of the hands), defect of the body of one of the upper lumbar vertebrae resulting in kyphosis, clouding of the corneas, depression of the nasal bridge with a purulent nasal discharge, an elongated sella turcica, low set ears and hernia. Minor stigmas were the deep grooves in the frontal veins and the sparse eyebrows composed of coarse, dark hairs. The child differs from most of the classic cases in her mentality. This appears almost normal for her age, although it is too soon to predict that mental deterioration will not occur. The prognosis seems relatively more hopeful. Because of the familial incidence of the condition, the parents were warned that even though the marriage is not consanguineous there is a possibility of a subsequent child being affected.

Edinburgh Medical Journal

48:1-72 (Jan.) 1941

The New Estrogens. E. C. Dodds.—p. 1.
Studies in Method and Standardization of Blood Examination: VII. Blood Sedimentation Rate, Sedimentation Volume and Centrifuge Volume. W. F. Harvey.—p. 14.
Modern Anesthesia. J. Gillies.—p. 26.
Studies on Stored Blood: V. Observations on Coagulation Mechanism in Stored Blood. A. Crosbie, H. Scarborough and J. C. Thompson.—p. 41.
Specialism. H. M. Traquair.—p. 52.

Lancet, London

1:33-66 (Jan. 11) 1941

Etiology of Polyneuritis. F. M. R. Walshe.—p. 33.
*Hematemesis from Peptic Ulcer: The Case for Operation. H. C. W. Nuttall.—p. 35.
Toxic Effects of Iroko, an African Wood. J. M. Davidson.—p. 38.
Exophthalmic Ophthalmoplegia: Case. L. Martin and V. Pennell.—p. 39.
Effects of Estrogens on Lactation. S. J. Folley.—p. 40.
Supravital Staining in Diagnosis of Monocytic Leukemia. R. MacKeith and Ursula M. Bailey.—p. 41.
Dressing of Open Wounds and Burns with Tulle Gras. D. N. Matthews.—p. 43.

Hematemesis from Peptic Ulcer.—Nuttall says that, in spite of what appears to be overwhelming evidence in favor of early operation for hematemesis due to peptic ulceration, it is far from being generally accepted, most textbooks advising medical treatment or operation only after the bleeding has ceased. The really severe hemorrhages are comparatively rare. A practitioner may see only one or two in several years, but that should be no excuse for complacence in a fatality; most patients can be saved by a timely operation. In the light of his own experience, the author pleads for a bolder attitude on the part of the average surgeon with experience in gastric surgery. Published mortality figures show that a considerable number of people die as the result of hemorrhage from peptic ulcer, and that an eroded vessel is usually present. Many of these deaths might be saved by operation. During the past eleven years the author operated on 18 patients suffering from profuse hematemesis. There were two deaths: one of a patient with carcinoma of the stomach and the other of a patient whose ulcer perforated shortly after the hematemesis. Of the patients who recovered, 1 had splenic anemia and 2 had gastrostaxis; the remaining 13 had ulcers with eroded vessels and would certainly have died if they had not been operated on. Blood transfusion and operation is the right treatment for severe hematemesis from a peptic ulcer. The methods used to arrest hemorrhage should be as simple as possbile and need not aim at preventing further ulceration.

Presse Médicale, Paris

48:929-952 (Nov. 20-23) 1940

First Menstruation and Clinical Incipience of Tuberculosis. P. Noblecourt.—p. 929.
Unilateral Digital Hippocratism and Its Diagnostic Value in Aneurysms of Subclavian Artery and Brachiocephalic Trunk. M. R. Castex and E. S. Mazzei.—p. 931.
*Diabetes and Minimal Infections (Peripheral Diabetes). H. Zondek and A. Kaatz.—p. 933.
*War Tetanus: Effect of Anesthetic Infiltration of the Sympathetic. R. Simon and G.-A. Patey.—p. 935.

Diabetes and Minimal Infections.—Zondek and Kaatz discuss the effects of afebrile infections seemingly of such pathologic insignificance as to escape the attention of patient and physician but yet powerful enough either to aggravate a known diabetes or to activate a latent one. In the 4 cases discussed, morbid phenomena consisted in dental granuloma and pyorrhea, a small seropurulent abscess of the skin and rheumatic tenovaginitis associated with pain in one wrist. Prompt improvement of the sugar metabolism after control of the foci of infection suggested that physicochemical modifications of the liver or muscular tissues were also involved. The doubt whether minimal infections can affect the pancreatic structure unfavorably leaves out of account the possibility that a particular sensitivity to the toxins of infections released in other parts of the body may exist in the liver cells of diabetic persons and that it does not require pronounced quantities of such toxins to provoke serious consequences. Among the factors exerting adverse effects are abnormal impulses arising in the central nervous system, adrenal hyperfunction, hyperfunction of the anterior lobe of the hypophysis and obstruction of insulin in the periphery of the organ (liver or musculature). The authors suggest that apparently unimportant infections, especially in the advanced decades, be given attention. Not only was refractivity to insulin overcome, but a completely normal carbohydrate metabolism could be reestablished following the control of mild infections.

War Tetanus.—Simon and Patey report their observations in 14 cases of war tetanus and recommend infiltration of the sympathetic with procaine hydrochloride as an effective measure in cases in which extensive neurovascular lesions or amputations elicit intolerable pain and the other symptoms of tetanus. They call attention to the fact that war tetanus exhibits features not usually found in peace time tetanus. Sudden excruciating pain may flare up against a background of fatigue, deprivation of food and tetanus intoxication, while shock and long neglect act as a direct irritation of the nervous centers, especially those of the midbrain, which are particularly receptive of tetanus toxins, and induce death. Treatment of war tetanus not only must be directed against existing tetanus intoxication but should seek to prevent or mitigate nervous irritation. Since an extensive peripheral lesion or a painful stump cannot be controlled by local treatment, including procaine infiltration of the regional nerve, the therapeutic attack of choice should be by procaine hydrochloride infiltration of the sympathetic, either in the lumbar or in the stellate region. The dose must be large, 20 cc. of a 1:100 solution administered according to the established technic. No sequels were observed.

Schweizerische medizinische Wochenschrift, Basel

70:1137-1160 (Nov. 30) 1940

Pathogenesis and Symptomatology of Endemic Sprue. N. Markoff.—p. 1137.
Effect of Onesided Nutrition on Mineral Levels in Animals. H. Kapp.—p. 1139.
Diagnosis and Evaluation of Stenosis of Aortic Isthmus: Case. M. Kartagener and E. A. Zimmer.—p. 1146.
Failure of Sulfapyridine Therapy in Infantile Pneumonia: Case. W. Abegg.—p. 1150.
*Mesenteric Adenitis Simulating Appendicitis. E. Urech.—p. 1152.

Mesenteric Adenitis Simulating Appendicitis.—Urech discusses a pathologic condition, occurring principally in children, which is characterized by an inflammation of the lymph nodes in the ileocecal region and particularly in the inferior portion of the mesentery of the ileum. The symptoms, about identical with those encountered in acute appendicitis and including pain in the right iliac fossa, often make differential diagnosis impossible. Pain may be very acute and is often localized to the right of the umbilicus. Viewed at biopsy, the lymph nodes are either isolated or aggregate, the latter forming an irregular mass of variable size (pea, bean, small hazelnut) sometimes significant in their massing but eluding palpation. These lymph nodes occur in greatest number in children aged from 2 to 3 years and gradually decrease with the growing years. In only one fourth of the children between 10 and 14 years are they seen and in only 5 per cent of those more than 18 years of age. The diseased lymph nodes observed studied histologically and by bacteriologic tests and guinea pig inoculation were found to be nontuberculous, though tuberculization may occur. A parallelism between mesenteric adenitis and enlarged tonsils or significant adenoid hypertrophy was not constant and hence diagnostically of limited value. Neither did the hematologic studies aid in the diagnosis. These indicated mild leukocytosis tending to lymphocytosis; the sedimentation rate was increased, especially during the days succeeding the operation, and the Wassermann test always gave a negative reaction. The prognosis was favorable but the cases exhibited a tendency to relapse. Mesenteric adenitis is classifiable with Pfeiffer's disease. Conservative treatment is in order; however, the author points out that, though the diagnosis may point to "abdominal adenoiditis" to the exclusion of appendicitis, surgical intervention may need to be resorted to in order to avoid grave consequences. Mesenteric adenitis is not a rare condition. The author's conclusions are based on observations covering all of the appendectomies performed during the course of from five to six years in a given hospital.

Medicina Sperimentale Archivio Italiano, Turin

6:609-672 (Oct.) 1940. **Partial Index**

*Action of Nicotinic Acid (Vitamin P-P) on Healing of Experimental Fractures and on Reticuloendothelial System. C. Scartozzi.—p. 609.
*Blood Choline Esterase and Arterial Hypertension. V. Longo and F. Sorrentino.—p. 629.

Nicotinic Acid in Healing of Experimental Fractures.—Scartozzi produced experimental fractures in young adult male rabbits, reduced the fragments and immobilized the limb. The animals were kept on a normal diet. One group received 0.05 Gm. of nicotinic acid every other day, a second group received 0.1 Gm., while a third group served as a control. Three animals of each group were killed on the sixteenth, thirty-first and forty-second day of the experiment. The results of microscopic studies confirmed those of roentgen studies previously performed. He found that nicotinic acid accelerated healing and stimulated formation of callus. The process of healing was more rapid and complete in the animals which received nicotinic acid than in the controls. Nicotinic acid stimulated also the function of the reticuloendothelial cells, especially in the liver and the spleen. The effects of nicotinic acid were the same for animals which received 0.05 Gm. as for those which received 0.1 Gm. of the substance. Apparently the administration of doses of more than 0.05 Gm. is not necessary. The effects of nicotinic acid were more evident during the first month of the experiment than in the later period.

Blood Choline Esterase and Arterial Hypertension.—Longo and Sorrentino determined the amounts of choline esterase in the blood of 60 persons with normal, high, and low blood pressure. The mean figure of choline esterase for each hundred cubic centimeters of blood serum in normal persons was 0.0016 Gm., in patients with arterial hypertension 0.0008 Gm. and in patients with hypotension 0.0023 Gm. The differences in the choline esterase content of the blood had no relation to the age, the general condition and the diet of the patient. The results point to a relationship between disturbances of organic production of choline esterase and arterial hypertension. A normal arterial pressure depends on the normal state of the cardiovascular and renal apparatus, the carotid sinus and other structures and also on other factors, one of which is the supply of acetylcholine to the blood in proper amounts for the regulation of blood pressure. The blood pressure lowering properties of acetylcholine are due to the effect of choline esterase, which acts as a buffer substance for acetylcholine by neutralizing the useless and harmful parts of the substance. Age, in the presence of certain pathologic conditions of the aforementioned structures, brings about either a diminished organic production of choline esterase with consequent hypertension or an increased organic production of the esterase with consequent hypotension.

Book Notices

The 1940 Year Book of Industrial and Orthopedic Surgery. Edited by Charles F. Painter, M.D., Orthopedic Surgeon to the Massachusetts Women's Hospital and Beth Israel Hospital, Boston. Cloth. Price, $3. Pp. 484, with 299 illustrations. Chicago: Year Book Publishers, Incorporated, 1940.

This is a welcome addition to the literature on industrial and orthopedic surgery. It is aimed at keeping a doctor abreast of developments in these specialties. It presents the essential working facts of two hundred and seventy-six articles chosen by the editor from eighty-six publications, forty-six of them issued in the United States and forty in fifteen foreign countries. Seventy-seven operations are presented, with step by step technic in thirty-seven; eighty-six clinical and operating room studies, each with an application to everyday orthopedic measures. Forty-two case reports cover a wide range of reconstructive surgery. Eighty-two lesions are discussed.

While it does not include every article published during the year, this volume presents a cross section of the more important contributions. The book is well organized and the summaries and abstracts are concise. There are numerous references to the foreign and American literature. The book reflects the various trends in orthopedic surgery and forms a useful and handy review for the busy surgeon. Its greatest usefulness would appear to be to the general practitioner, the pediatrician and the radiologist, who will find it a ready reference to a large orthopedic and industrial literature.

The qualifications of the editor are attested by his associations and his standing in his community and abroad. He has at his immediate disposal the enormous resources of the *Journal of Bone and Joint Surgery* and especially the intimate personal and professional contact of Dr. Brackett, its editor. While it is impossible to please everybody in the selection of articles, one will find that the editor has achieved his primary objectives, and the secondary benefits that will accrue are worthy.

Practical Handbook of the Pathology of the Skin: An Introduction to the Histology, Pathology, Bacteriology and Mycology of the Skin With Special Reference to Technique. By J. M. H. Macleod, M.A., M.D., F.R.C.P., Physician and Hon. Director of the Pathological Department, St. John's Hospital for Diseases of the Skin, London, and I. Muende, M.B., B.S., B.Sc., Pathologist in Charge of Out-Patients' Clinic, St. John's Hospital for Diseases of the Skin. Second edition. Cloth. Price, 42s. Pp. 415, with 152 illustrations. New York: Paul B. Hoeber, Inc.; London: H. K. Lewis & Co., Ltd., 1940.

It is ambitious to attempt to crowd histology, pathology, bacteriology and mycology into four hundred and two pages, yet the authors have made a highly creditable showing. It is inevitable that the data should be sketchy and the subjects more or less disconnected. Indeed, many parts of the book suggest students' lecture notes which have been more or less amplified. The end result is a book from which it would be difficult for the novice to gain a well connected idea of the subjects discussed. The book is well-nigh ideal for students who have had courses of lectures on the subject matter and who would value the opportunity to refresh their memories on key points.

Perhaps some room for additional details on tissue processes could be salvaged by omitting data which can be readily secured in standard textbooks on general pathology. For example, the technic for the examination of the blood occupies eight pages, and histologic technic occupies twenty-eight pages. It would serve dermatologic purposes sufficiently if only the phases which had a special application in dermatology were included in these sections, leaving the reader to secure the remainder of the information from standard sources. It would not be amiss if a chapter on the pathologic chemistry of the skin was substituted in place of these, gathering here the data on the changes in the blood and urine. Alkaptonuria is not indexed. About half of the book amounts to a treatise on the histopathology of the skin. The remainder extends further than histopathology and includes considerations of physiologic chemistry, embryology and parasitology. The data are thoroughly down to date and are dealt with in the sensible, clearcut way for which Britons are noted.

The book is excellently printed on enameled stock and illustrations are reasonably numerous. All of them are good. Typographic errors are few. A lapse in expression is noted in figure 1, in which the authors use "palm of the hand" whereas in the text "of the hand" is consistently and properly omitted. The authors are not at all consistent in the use of capitals in connection with the names of diseases or even structures (Molluscum body, p. 68; Vernix caseosa, p. 38; Condyloma acuminata, p. 72; Stratum corneum, p. 57). On page 161, "appreciative pathologic changes" should probably read "appreciable." On page 352 the authors apparently regard lepothrix as synonymous with trichomycosis nodosa. However, these are not substantial criticisms and do not affect the practical value of the work as a whole. The authors are to be congratulated in the selection of subjects in dermatology which have for years needed textbook treatment and for having compassed so much within four hundred and two pages.

Gang und Technik der Röntgenuntersuchung auf Harnsteine. Von Dr. Eduard Pflaumer, a. o. Professor für Urologie an der Universität Erlangen, Erlangen, und Dr. Hermann Friedrich. Die Urologie in Einzeldarstellungen, herausgegeben von Prof. Dr. H. Boemingshaus. Boards. Price, 8 marks. Pp. 96, with 50 illustrations. Leipzig: Georg Thieme, 1940.

This brochure narrates the procedure of roentgen examination for urolithiasis, with many illustrations and an exact roentgenographic technic. The monograph is evidently intended for the use of general practitioners as well as specialists in urology. All the essentials of roentgenographic technic which have been universally employed for a great many years are noted in detail and the authors make a plea for exact roentgen diagnosis from films rather than the use of urologic instrumental procedures. All the suggestions made are in vogue everywhere, and no new technics are advocated. Intravenous urography is suggested as a useful adjuvant in diagnosis, but the authors warn against the indiscriminate employment of cystoscopic and retrograde pyelographic procedures. This, of course, is contrary to accepted practices among well known urologists. The authors believe however that, if retrograde pyelography is utilized, oxygen is the most harmless pyelographic medium. As there is a general acceptance of iodide derivatives for both intravenous and retrograde urography, plea for the employment of oxygen is not warranted. For cystography, air or oxygen is universally employed. Considerable detailed information is given with regard to the use of roentgenography at the operating table when kidneys have been exposed for lithotomy. Some years ago, Carman of the Mayo Clinic, Beer of New York and Quinby of Boston recommended the use of roentgenograms in specially devised and sterilizable cassettes at the operating table, since which time urologists everywhere have employed this combination technical procedure. The authors believe that 50 per cent of patients operated on for nephrolithiasis have fragments of calculi which are overlooked. It is doubtful whether this is an accurate observation.

Orthopedic Surgery for Nurses Including Nursing Care. By Philip Lewin, M.D., F.A.C.S., Associate Professor of Bone and Joint Surgery, Northwestern University Medical School, Chicago. Third edition. Cloth. Price, $3.50. Pp. 462, with 195 illustrations by Harold Laufman, M.D. Philadelphia & London: W. B. Saunders Company, 1940.

This book is full of practical material and is well illustrated. Although the book is intended primarily for nurses, it would be valuable in the libraries of practitioners of medicine and of medical students. It covers, in a general way, most of the problems of orthopedic surgery. Many parts of the book would be useful to physical therapists, especially those in the field. In Massachusetts under a law passed two years ago, all visible deformities must be reported on the birth certificate. This is probably one of the most powerful assets in knowing about the population of cripples. Mention might be made of this to secure similar action in other states. The chapter on orthopedic nursing gives some sound and practical points and should be read carefully by all nurses who intend to specialize in the care of orthopedic patients. There might be some criticism of some of the apparatus. For instance, the illustration of the shoulder spica on page 55 does not show that the spica grasps the crest of the ilium. This feature of the spica is important especially in cases of infantile paralysis, if one wishes to avoid curvature of the spine and make the patient more comfortable. Under the chapter

on osteomyelitis, the reviewer does not agree that surgical treatment should be started as soon as the diagnosis is made, since many of these patients are dehydrated. It is wiser to combat the dehydration and get the patient into better general condition before operating. As a part of the operative nursing setup it is probably far wiser not to have the anesthesia started until all preparations are made and the surgeon is ready to operate. The subject of poliomyelitis in general is well covered and gives a good idea of the management of such patients. The operative treatment naturally has to be abbreviated in such a short work, but some of the operations could be brought up to date. For example, on page 263, in the description of Legg's operation, the transplant of the tensor fasciae femoris muscle into the outer side of the femur to increase the power of abduction was later revised by Legg, and he transplanted the origin of the tensor fasciae femoris farther out on the crest of the ilium, not touching the lower portion of the fascia. The indications for stabilization for a flail shoulder are not clear. The author in the same chapter states that hip abduction contractures are uncommon. In paralysis of the whole leg it is the experience of the reviewer that they are common. The title of the book is rather misleading in that the author does not deal with orthopedic nursing care alone. There are so many valuable subjects in it, however, that it is recommended to nurses' training schools, graduate nurses, medical students, physical therapists and the medical profession in general.

A Family Doctor's Notebook. By I. J. Wolf, M.D. Cloth. Price, $2. Pp. 315, with portrait. New York: Fortuny's, Publishers, Inc., 1940.

The author in his first fifty years of practice apparently could never find time to write. Now at 75 he is emeritus professor of medicine at the University of Kansas Medical School and has yielded to the urge to express his opinion on various subjects. Dr. Wolf was born in Germany near Stuttgart at a time when Jews and Gentiles lived there in harmony side by side. Why this good will cannot continue he does not understand. He discusses this question in the first chapter, which is one of two devoted to his own life. He went to Heidelberg, which was the most beautiful and most famous of all German universities. Students belonging to the fraternities at Heidelberg (the "Corps" and the "Burschenschaften") seldom attended lectures, and all they did, he says, was to learn to fight duels, frequent banquets, drink, sing and sleep. These fencing duels were in the nature of an exhibition of skill and rivalry in the art of fencing but were forbidden by law; yet twice a week students in the fraternities went out to their place of rendezvous and two hours later returned, some with their heads bandaged. The author could not fight duels or join a fraternity because he was not financially able. He left Heidelberg to continue his medical study at Munich and came to the United States in 1888, having passed his state examination and spent the required period of time in the German army. After fifteen years of practice in Kansas City he had accumulated by saving and investing about $35,000. In 1905 he joined the faculty of the Medical Department of Kansas University as professor of medicine and he has been connected with the school ever since, teaching gastroenterology and dietetics. On his sixtieth birthday his friends and patients gave him an automobile, a diamond ring and a check for $6,500, and with this money he and his family made a four months trip to Europe. In 1937 the staff of the Menorah Hospital gave a dinner commemorating the author's fiftieth year in practice; while responding to the addresses he was stricken with coronary occlusion, from which he has never entirely recovered. Following his brief autobiography he writes about the cooperation of the physician and patient, medical ethics, types of physicians, success in the practice of medicine, quacks and nervous patients. In part three he discusses medical economics, birth control, vivisection, periodic health examinations, family physicians and specialists. In part four he writes about the physician and religion. His book closes with the following sentence from Descartes: "If ever the human race is raised to its highest practicable level intellectually, morally and physically, the science of medicine will perform that service."

Man's Greatest Victory Over Tuberculosis. By J. Arthur Myers, Ph.D., M.D., F.A.C.P., Professor of Medicine and Preventive Medicine and Public Health, University of Minnesota, Minneapolis. Cloth. Price, $5. Pp. 419, with 31 illustrations. Springfield, Illinois & Baltimore: Charles C. Thomas, Publisher, 1940.

The major part of this book is devoted to tuberculosis in cattle. There is recorded step by step in the single chapters the methods that have been used to diagnose, to treat and to prevent tuberculosis in cattle. The program of the veterinarian as emphasized throughout the book has been fully effective in the United States since, in 1917, veterinary science and administration made plans on a large scale to eradicate the disease in animals. The single chapters of the monograph give an excellent review of the history of tuberculosis in animals as well as in human beings. To mention only a few items: cattle as the core of civilization; diseases among animals; recognition, sacrifices and accomplishments of the veterinarians; the United States Bureau of Animal Industry; geographic distribution and prevalence of tuberculosis in cattle. There are some more chapters on the nature of tuberculosis, the tubercle bacillus, tuberculin and the tuberculin test. They are supplemented by an extensive chapter on the much discussed question of specific immunity in tuberculosis. Every student of tuberculosis will benefit from these critical explanations, in which the different methods of vaccination are carefully reported from Robert Koch's discovery to Calmette's BCG. The next chapters deal in greater detail with the early attempts to control tuberculosis among cattle in Europe and the United States, the practical eradication of bovine tuberculosis in this country and the economy of this achievement. These accomplishments of the veterinarians constitute man's greatest victory over tuberculosis.

The information about bovine tuberculosis, as the author points out in his preface, is widely separated in point of time and location. It "should be easily available to every physician, because in tuberculosis of humans many problems which today are considered controversial have already been solved by the veterinary profession." However, it must not be forgotten that the task of the veterinarian is somewhat easier. He can remove radically the sources of infection and eventually kill them, which the physician cannot. But also for man, Myers believes, there are almost as effective measures in controlling the disease, namely isolation, treatment and education, as the sharp decline of tuberculosis mortality has demonstrated during the last decades. Although the author seems throughout the book to overrate somewhat the purely contagious character of tuberculosis in man, neglecting almost entirely the social economic and hereditary components of the disease in human society (which is of course far different from a herd of cattle under human control), the contents and the conclusions deserve all attention of the medical world and public health administration. The book is well written and highly suggestive in every chapter, containing plenty of references to former and present research work. It closes with some lessons for physicians in human medicine and an ample bibliography.

Hydrocephalus: Its Symptomatology, Pathology, Pathogenesis and Treatment. By Otto Marburg, M.D. Cloth. Price, $3. Pp. 217, with 28 illustrations. New York: Oskar Piest, 1940.

The author has done much research on hydrocephalus. The book includes discussions of every phase of the disease and a critical review of the literature, also a discussion of cerebrospinal fluid both under normal conditions and in hydrocephalus. In the main, the author's conception of hydrocephalus is that it is a disturbance of water metabolism. "Undoubtedly more fluid than is normal enters into the brain in hydrocephalus, and reabsorption is also affected, both caused by a disturbance of the permeability of the hematoencephalic barrier. Since this mechanism is not able to reabsorb the large amount of fluid in the usual manner, the fluid enters into the ventricular system; and this increase of fluid in the ventricles enlarges them. It is not necessary to prove whether the active process of the increase of water or the passive of the reabsorption plays a greater role. All the other facts described as the causes of hydrocephalus are only incidental. By increasing the enlargements of the ventricles and by obstructing the communications, they establish the hydrocephalus." There are numerous good illustrations, particularly of the pathology of hydrocephalus. At the end of the book there is an extensive bibliography of the subject. The book is useful to any one who is interested in hydrocephalus.

Queries and Minor Notes

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SEVERE CARDIAC FAILURE WITH ASCITES

To the Editor:—A man aged 37, of Swedish parentage, had inflammatory rheumatism seventeen years ago. Heart disease developed a year and a half ago, showing itself in edema of the legs which gradually increased until ascites developed, this becoming extreme, and at the time I first saw the patient his abdomen was tightly distended and he had extreme edema of the legs and scrotum but no evidence of fluid above the diaphragm. He was at that time (Sept. 28, 1940) excreting only about a pint of urine a day of specific gravity of 1.028, containing no albumin or casts, although the patient was told he had kidney trouble. He was at that time taking digitalis and a preparation of the enzymes and hormones of the kidney. The heart action was irregular and there were both systolic and diastolic (aortic regurgitation) murmurs with a blood pressure of 160 systolic and 10 diastolic and only an occasional systolic beat registering 160. Two quarts of ascitic fluid was removed on September 29, 4 quarts on October 2 and 5½ quarts on October 5. He stood the tapping well. Since then he has been tapped at frequent intervals, the operation yielding on one occasion as much as 8½ quarts and on a recent tapping as much as 9 quarts. Since Oct. 5, 1940 he has been getting salyrgan, 1 cc. (later changed to salyrgan-theophylline, 1 cc.). This is given in combination with nikethamide 1.5 cc. and occasionally an extract of unfatigued muscle is added. At one time under this medication the renal output was suddenly increased to 5½ quarts in twenty-four hours, the first few voidings of which were of low specific gravity. But mostly after administration of these preparations the voiding for the first twenty-four hours has been only the normal amount of 1½ quarts. The patient is kept in a recumbent posture most of the time but, being a young man and "feeling fine" after the tappings, he does walk around a little and has some of his meals at the table. Fluids are restricted as much as possible and also salt. Thyroid medication in small amounts with iodine (soluble) was also tried for a short time but with no appreciable result. After the tappings the heart action becomes more regular and the diastolic murmur of the virtual aortic regurgitation disappears, the mitral systolic murmur alone remaining. There is practically no dyspnea remaining after the tappings, and only within the last ten days has any pulmonary edema appeared and then only slight, again disappearing after the tapping. The patient is gradually becoming more and more emaciated. His appetite is voracious and his digestion good. The case is one of practically pure and simple hemodynamics. The unusual feature is the large amount of fluid it is possible frequently (and of necessity) to withdraw. The specific gravity of this is 1.012. It is almost clear, slightly opalescent, straw yellow in color, and not having the slight orange tinge that urine has. I should like to know whether any additional medication can be given to increase the urinary output. Will a larger dose of salyrgan-theophylline help? He lives several miles from my office in his home and is attended by members of his family. He is unmarried and has at all times lived a wholesome life. I also should like to know whether an operation on the aortic valve would benefit him and who would be willing and competent to undertake such an operation.

M.D., New York.

ANSWER.—The case described is unusual with regard to the type of onset of heart failure. Ordinarily in aortic valvular disease a period of weeks or months of left ventricular weakness with pulmonary congestion, dyspnea and orthopnea precedes the development of edema of the legs and ascites, which are signs of right ventricular failure and systemic venous congestion. One wonders whether the patient does not have rheumatic tricuspid valvular disease in addition to aortic, and probably mitral, involvement. Tricuspid insufficiency or stenosis could readily produce the edema and ascites with relatively few pulmonary signs or could relieve the congestion of the lungs caused by left ventricular insufficiency. There should be obvious venous engorgement in the neck and cyanosis. The irregular heart action, if due to auricular fibrillation and not simply extra systoles, is rather atypical in uncomplicated aortic regurgitation and is much more likely to occur in mitral or tricuspid disease. Were it not for the history of acute rheumatic fever at the age of 20 and the presence of typical aortic murmurs, a high pulse pressure and low diastolic level, the syndrome of recurrent ascites and edema of the legs without hydrothorax should lead one to consider a thickened pericardium, with obstruction of venous inflow from the lower half of the body. The heart is usually not enlarged and its tones and pulsations (fluoroscopy) are noticeably reduced. There is certainly no urinary evidence of renal disease, and renal function appears normal. Cirrhosis of the liver is a possibility but further investigation is necessary, such as testing of liver function and the attempt to demonstrate esophageal varices by fluoroscopy. A final diagnostic possibility is an unrecognized large arteriovenous fistula, such as a patent ductus arteriosus, which can produce the peripheral signs of aortic insufficiency and right ventricular failure. In the heart itself a patent interventricular or interauricular septum could add various types of murmurs and arrhythmias to the picture. Careful fluoroscopic and electrocardiographic study of the patient may yield decisive information on this point.

As to treatment, it is unwise to remove ascitic fluid repeatedly by paracentesis, because considerable wastage of plasma protein results, with eventual emaciation even if the patient is able to eat a good diet. It would be interesting to determine the plasma albumin and globulin level in this case. Instead of tappings, it might be desirable to give 1.5 or 2 cc. doses of an organic mercurial intravenously once a week, preferably preceded by three or four days of oral administration of 4 to 8 Gm. of ammonium nitrate, given in divided doses with meals. Nikethamide and muscle extracts are not indicated. Digitalis may be continued in maintenance doses unless signs of overdigitalization appear. An operation on the aortic ring would certainly not benefit the patient and might well result in serious immediate consequences.

DYSPNEA AND ULTRAVIOLET THERAPY

To the Editor:—A woman aged 68, whose chief complaint is shortness of breath, is fairly stout and tends to hypertension. Last March her blood pressure was 200 systolic and 100 diastolic, although of late it has been around 140 to 150 systolic and 80 to 90 diastolic. She is 5 feet 2 inches (157.5 cc.) in height and weighs 160 pounds (72.6 Kg.). She shows a distinct allergy to cold. Last March the heart action was rhythmic rate 90, while under examination. The second aortic was slighter than the second pulmonic sound. The heart outline was somewhat enlarged. The apex beat was diffuse and out to the left of normal. Submanubrial dulness was increased. A coarse systolic murmur was heard over the entire precordium, presumably the result of atherosclerotic changes. The electrocardiogram showed some changes that were conservative of myocardial symptoms on the basis of her hypertension and interestially due to slowly progressing coronary changes. The graph showed an atypical bundle branch block, not of high grade but construed as showing myocardial damage. The patient was recently given ultraviolet therapy. She was given irradiations every two days, beginning with a half minute to each of four areas and gradually increasing this to two minutes, which she is now receiving. The areas were divided as follows: 1. From the face down to the umbilicus. 2. From the umbilicus down to the toes. 3. In back from the crown of the head down to the area at a level corresponding to the level of the umbilicus in front to the level of the toes. In other words there were two areas in front and two in back. The patient states that she feels better after each treatment and that in general she feels better since these treatments were begun than she felt previously. Is there any contraindication to ultraviolet therapy in a case of this kind?

M.D., Michigan.

ANSWER.—From the information given the diagnosis is far from clear. The shortness of breath may be related to cardiovascular changes, obesity and age or to other undisclosed factors. The mention of increased substernal dulness suggests the possibility of a mediastinal lesion that might cause dyspnea. In the absence of a clear diagnosis the indications for ultraviolet therapy also are indefinite. The fact that the patient states that she feels better after each treatment and that she feels better now than she felt before the ultraviolet treatment was started may or may not mean much. The apparent improvement might be the effect of suggestion.

There does not appear to be any contraindication to ultraviolet therapy under the circumstances mentioned, provided the kidneys are functioning normally. However, it would be wise to exclude every factor that might cause dyspnea.

HICCUPING IN INFANT

To the Editor:—What is the probable cause of frequent hiccuping by a baby 2 weeks old? After every meal she is troubled distressingly with rather violent singultus. Water, change of position and like measures have caused little if any relief.

M.D., Massachusetts.

ANSWER.—Hiccuping consists in a clonic contraction of the diaphragm. There exists a medullary center adjoining the center for the vagus nerve in the medulla. Reflex stimuli may be transmitted to this center and incite the hiccup reflex. Four fifths of the stimuli which initiate this reflex originate in the stomach.

In a 2 week old infant who hiccups after each meal the afferent stimuli to the medullary center probably arise in the stomach and are transmitted to the diaphragm through the phrenic nerve. This reflex may be initiated by too rapid nursing, the ingestion of unduly hot or cold milk, dilatation of the stomach and aerophagia. The last-named condition is probably the commonest cause of hiccups in a newborn infant.

If the nursing is interrupted and the baby held on the shoulder and patted on the back, the belching of air ingested with the milk will empty the stomach of a considerable air bubble and will probably prevent the initiation of the hiccup.

Organic causes such as mediastinal irritation of the vagus or phrenic nerves by means of enlarged bronchial or medias-

tinal glands, or because of malignant mediastinal growth, would hardly be thought of in an apparently otherwise normal 2 week old infant. Likewise, direct irritation of the medullary center from organic cerebral disease would hardly be considered in so young a child.

CONVULSIVE SEIZURES IN PREGNANCY

To the Editor:—A white woman aged 23, in the fourth month of her first pregnancy, suffered a convulsive seizure in her sleep. Her physical examination when she came under my care revealed no abnormalities. There is no pertinent familial or traumatic history. The description of the attack as written by her husband could easily have been taken from a textbook description of a typical grand mal convulsion. Two and a half months later the same thing was repeated, also starting in her sleep. No significant facts were obtained in a detailed neurologic examination. Some authorities on obstetrics have noted first onset of such convulsions during pregnancy and not thereafter. This patient does not show any evidence of toxemia of pregnancy. Is the foregoing any reason to interrupt a pregnancy, or should subsequent pregnancies be interdicted even though she may have no convulsive seizures?

M.D., California.

ANSWER.—Epilepsy occasionally manifests itself for the first time during a pregnancy. When this occurs, there may be some difficulty in ruling out possible eclamptic convulsions. In the absence of observations of toxemia of pregnancy, eclampsia need not be considered.

Epilepsy which first begins in pregnancy is likely to continue after the gestation and pursue a typical course. The interruption of pregnancy would not be indicated in this case because of the infrequent seizures. Furthermore, it is rarely advisable to resort to drastic procedures to prevent future pregnancies. The interruption of pregnancy and sterilization is advisable in cases in which the epileptic attacks occur at increasingly frequent intervals, in which the epilepsy cannot be controlled by measures that are available today and particularly when there are evidences of mental deterioration. There are probably some hereditary factors in the development of epilepsy, but these are not definitely known.

FOOT BATHS FOR RINGWORM PREVENTION

To the Editor:—I will appreciate any information furnished concerning the effectiveness of fungicidal preparations for foot bath use in the prevention of athlete's foot in shower rooms. Particularly, I would like your comments as to the usefulness of Mercurous Iodide Compound, P. C. 15 (mild mercurous chloride, potassium iodide, calcium iodide, sodium chloride, alcohol 50 per cent, acetone, soap and triethanolamine), manufactured by the Mar-Kil Chemical Products Company and Kalusoff's Floor Concentrate (4, 6 benzyl 2 chlorphenol in alcohol and oil soap, manufactured by Kalusoff, Limited) as compared to sodium hypochlorite. It has been stated that sodium hypochlorite when used for the described purpose is effective for not more than five hours. Is this true? Any other information regarding the prevention of athlete's foot in shower rooms will be gratefully received.

Francis C. Black, Oak Park, Ill.

ANSWER.—So far as is known, no controlled fungicidal studies have been made on either of the products mentioned. Fungicidal studies done on separate components do not indicate any superiority over the common and cheap sodium hypochlorite. In aqueous suspension, none of the ingredients mentioned can compare with the fungicidal activity of sodium hypochlorite. A 1 per cent solution of sodium hypochlorite standing in an open pan is effective against the common organisms of ringworm of the feet for forty-eight hours. It requires only 0.5 per cent sodium hypochlorite to kill the most resistant organism in aqueous suspension. None of these preparations are curative. For further information, refer to Osborne and Hitchcock (Prophylaxis of Ringworm of the Feet, THE JOURNAL, Aug. 1, 1931, p. 453).

VITAMIN B_1 AND PARALYSIS AGITANS

To the Editor:—Is the intravenous use of vitamin B_1 a recognized treatment of paralysis agitans? In what stage of the disease is it effective if at all? Is there much appreciable danger in its use? How many injections are necessary and what are the approved preparations?

Hilton A. Wick, M.D., New Bethlehem, Pa.

ANSWER.—The use of vitamin B_1 (pyridoxine hydrochloride) in the treatment of paralysis agitans is a purely experimental procedure. Spies has treated some 40 patients by this means and reports no cures. Approximately 20 per cent of the patients experienced considerable subjective relief and became less rigid, and in some instances a decrease in the tremors occurred. A few have been able to return to work. However, 80 per cent received no benefit at all. No explanation has been offered as to why it relieves some and not others. Spies injected intravenously 50 mg. of the synthetic product in sterile physiologic solution of sodium chloride three times a week. If there was no improvement within two weeks, Spies considered the "therapeutic test" a failure.

NASAL ULCER, EPISTAXIS AND HYPERTENSION

To the Editor:—A woman aged 65 has been under treatment for hypertension and pernicious anemia for several years. Nasal hemorrhages which occurred at intervals of several months have recently been occurring at weekly intervals with loss of about 8 to 10 ounces (235-300 cc.) of blood on each occasion. Blood pressure readings average between 240 systolic and 110 diastolic and 200 systolic and 120 diastolic, the latter usually at the time of hemorrhage. Examination of the nose revealed an ulcerated area on the left side of the septum (all bleeding is from this side) behind Kiesselbach's area. Opinion is divided as to the wisdom of cauterizing the area in an attempt to avoid these repeated hemorrhages. The question has arisen whether or not with this source of relief during high pressure seizures gone, would hemorrhages be likely to occur elsewhere and possibly result in hemiplegia or other serious complications? What would you advise?

Samuel Turetsky, M. D., Brooklyn.

ANSWER.—The solution of this problem requires exceedingly good judgment. There can be no question that bleeding furnishes a temporary respite from hypertension. It must be remembered that such relief is temporary and that the pressure returns with a varying degree of rapidity to the prebleeding level.

Frequent hemorrhages place a considerable strain on the blood-forming tissue, and one always fears exhaustion of this tissue because of the repeated demands made on it.

In the case in question there is also the added hazard of pernicious anemia. In addition to this the lowest readings mentioned in this question are not incompatible with a circulatory accident.

In the absence of knowledge concerning the blood cell count and hemoglobin, it would seem safer to stop this source of bleeding if possible and depend on the more controllable method of venesection whenever bleeding seems necessary or desirable.

SHORT VAGINAL CANAL AND ATROPHIED UTERUS AND ADNEXA

To the Editor:—A woman of 33, married three years, has never menstruated but is otherwise normal physically in every respect. The vaginal canal is patent, but there is no cervix present, there being only a dimple where normally the cervix would be. The uterus is rudimentary, i. e., only a cordlike structure. Neither ovary can be felt, and the ovaries are evidently atrophied. Evidently there is frigidity, and I would appreciate any suggestions as how to overcome it. The patient also complains that the vaginal canal is short and there is dissatisfaction on the part of the husband during intercourse. Is there anything that can be done to remedy the condition?

M.D., New Jersey.

ANSWER.—The outlook for such a patient as described is rather discouraging. For the frigidity little can be done. A plastic operation on the vagina may make sexual contact much more comfortable. The recently described procedures of Counseller and of Frank and Geist have yielded encouraging results and are less formidable than the Baldwin operation.

METRAZOL GIVEN INTRAMUSCULARLY AND TRIAZOL GIVEN ORALLY TO PRODUCE CONVULSIONS

To the Editor:—Has metrazol been given intramuscularly in the convulsive therapy of psychoses in cases in which there are no readily available veins? Has the drug triazol been given orally in the convulsive treatment of psychosis?

M.D., California.

ANSWER.—Metrazol may be used intramuscularly in the regular 10 per cent solution. It is often necessary to give a dose which is 1 or 2 cc. larger than the dose used by vein. The action is somewhat delayed and may not appear for three or four minutes after the injection.

Triazol has not, according to available information, been given orally, although it is also quite satisfactory if given intramuscularly. This drug is of German origin and has not been obtained since the outbreak of the war. It seems to have no particular advantage over metrazol and other convulsive drugs in the light of present knowledge.

FEW MOTILE SPERMATOZOA AFTER OPERATION FOR CRYPTORCHISM

To the Editor:—A married man aged 26 has recently been relieved of cryptorchism by operation. Both testes are now present in the scrotum and the surgeon satisfies me that the operation was successful. This procedure was done six months ago. The patient is healthy in every respect in all laboratory work except basal metabolic rate (—11), and thyroid medication has just been started. A week ago I examined a specimen of his spermatic fluid following intercourse and was able to find only a few motile sperm. These appear abnormal in shape. Please advise the best method of treating him, as he is desirous of having children.

M.D., Tennessee.

ANSWER.—The fact that some spermatozoa were found indicates that there is no occlusion of the genital tubes but that the condition is endocrine in character. However, at present there is no satisfactory method of inducing spermatogenesis.